

September 1, 2004

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BUREAU OF AIR REGULATION

Via FedEx Airbill No. 7902 5949 1651

Mr. Jeffery F. Koerner, P.E. **New Source Review Section** Florida Department of Environmental Protection 111 South Magnolia Avenue, Suite 4 Tallahassee, Florida 32301

> H.L. Culbreath Bayside Power Station **Request for Additional Information**

Project No. 0570040-022-AV

Revision of Title V Permit No. 0570040-017-AV (as amended)

Addition of Bayside Units 1 and 2

Dear Mr. Koerner:

Tampa Electric Company (TEC) has received your letter dated June 4, 2004 (received by TEC on June 7, 2004), requesting additional information with regards to the application to revise the current Title V air operation permit to include new Units 1 and 2 of H.L. Culbreath Bayside Power Station (Bayside). This correspondence is intended to provide a response to each specific issue raised by the Department and the Environmental Protection Commission of Hillsborough County (EPCHC). The Responsible Official Certification and the Professional Engineer Certification are provided in Attachment A. For your convenience, TEC has restated each point and provided a response below each specific issue.

### FDEP Item 1

Page 8, Facility Regulatory Classifications: TECO does not identify this facility as a "major source of hazardous air pollutants". However, the current Title V permit includes the following statement, "Based on the Title V permit revision application received on April 15, 2002, this facility is a major source of hazardous air pollutants (HAPs)." With the recent shutdown of the coal-fired boilers, is TECO requesting this change be made to the Title V permit?

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#### **TEC Response**

TEC currently has four permit applications on file with FDEP for Bayside: simple cycle operation and limited oil firing for Bayside Unit 3; minor modifications to Permit PSD-FL-301A; Title V renewal; and this current Title V revision to add Bayside Units 1 and 2. TEC has staggered the permit applications to allow each one to be handled separately although they are closely related. The application for the revision of the Title V permit No. 0570040-017-AV (as amended via Project No. 0570040-022-AV), requests to roll-in Bayside Units 1 and 2 into the existing Gannon Title V permit. TEC is not requesting any other changes with this application. On July 1, 2004, TEC submitted the Title V permit Renewal application to FDEP where changes to the existing permit have been requested; the removal of several emission units are among these requests. In the H.L. Culbreath Bayside Title V Permit Renewal application, TEC identified the facility as a major source of air pollutants other than hazardous air pollutants (HAPs). Please reference any further questions concerning the status of major source of HAPs to the H.L. Culbreath Bayside Title V Permit Renewal application project.

### FDEP Item 2

Shutdown of Gannon Units: Previously, TECO notified the Department of the actual shutdown dates for each Gannon Unit 1 – 6 as well as the shutdown date for purposes of the acid rain program. Because these units are permanently shutdown as required by Permit No. PSD-FL-301A, the Department intends to remove these units from the Title V permit. Please comment. Describe the impacts of these shutdowns with regard to the existing Acid Rain part (Section IV) of the current Title V Permit No. 0570040-017-AV (as amended).

#### **TEC Response**

As stated in response to FDEP Item 1 above, TEC has already requested these units be removed from the existing Title V permit with the Title V Renewal application submitted on July 1, 2004. Please reference any further Gannon shutdown questions to the H.L. Culbreath Bayside Title V Permit Renewal application project.

#### FDEP Item 3

<u>Coal Handling and Storage Equipment</u>: Identify any of these existing emissions units that have been removed from site and/or permanently shutdown (rendered incapable of operation). The Department also intends to remove these units from the Title V permit. Please comment. In addition, describe TECO's plans for any of the existing coal handling and storage equipment.

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#### **TEC Response**

As stated in response to FDEP Item 1 above, TEC has addressed the removal of certain emission units from the existing Title V permit with the Title V Renewal application submitted on July 1, 2004. Please reference any further coal handling and storage equipment questions to the H.L. Culbreath Bayside Title V Permit Renewal application project.

### FDEP Item 4

<u>CAM Plan</u>: Please provide a Compliance Assurance Monitoring Plan for the SCR system used to reduce NOx emissions from Bayside Units 1 and 2.

### **TEC Response**

The discussion of CAM Plan applicability for Bayside Units 1 and 2 SCR system is addressed in the Title V permit Renewal application. Please reference any further questions to the H.L. Culbreath Bayside Title V Permit Renewal application submitted on July 1, 2004.

#### FDEP Item 5

<u>Compliance Status</u>: The application (Attachment 7) includes a certification that all emissions units are in compliance with all existing requirements and permit conditions. The Department's database indicates a "minor non-compliance" issue for Bayside Unit 1A dated February of this year. Please describe the compliance issue and whether or not the unit is back in compliance. Units that are out of compliance require a compliance plan.

### **TEC Response**

TEC described to EPCHC that on February 28, 2004, the Steam Turbine (ST) was removed from service to change the generator brushes as part of routine maintenance on the ST. Unit 1A was used to start-up the ST that same day. However, on February 29, 2004, the ST tripped while in the process of starting up and needed to be brought back up. The ST tripped due to low header pressure caused by the governor valves going full open (100%). The governor valves regulate how much steam goes through the ST. Unit 1A was used to bring the steam turbine back up and the load was decreased to 10 MW. It took five hours for the steam turbine to be brought back on-line. TEC experienced excess emissions of NO<sub>x</sub> and CO for 5 hours, but was able to exclude four hours for startup, in accordance with permit Condition 17.c.(1) of PSD-FL-301A. After averaging one hour of excess emissions into the 24-hour average on February 29, 2004, Unit 1A was out of compliance; TEC experienced an exceedance of both NO<sub>x</sub> and CO on Unit 1A. As a result of this event, TEC has changed the logic in the digital control system (DCS) and the list of permissives on

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the DCS has been changed to include a permissive for "Governor Valves Full Open." In addition, TEC has requested a ST warm startup provision that will help minimize emissions when the ST trips off-line and needs to be brought back up. The unit was immediately brought back into compliance.

### FDEP Item 6

<u>Semiannual CEMS Report</u>: Please submit a copy of the "Semiannual CEMS Report" for the second period of 2003, which is required by Condition 25 (Section IIIA) of Permit No. PSD-FL-301A.

### **TEC** Response

On July 19, 2004, TEC submitted a copy of Bayside's last two semi-annual reports for Bayside Units 1 and 2 that summarize data exclusion due to malfunctions. These reports were submitted for Quarter II, 2003 and Quarters III & IV, 2003 for Bayside Unit 1 and Bayside Units 1 & 2 respectively. Although these were requested as additional information for the *Minor Modification to the PSD Permit*, this report is the Semiannual CEMS Report. An additional copy for the second period of 2003 (Quarters III & IV) has been attached for your reference. Please see Attachment C.

### FDEP Item 7

Timing of Permit Projects: TECO currently has open applications for the following projects: simple cycle operation and limited oil firing for Bayside Unit 3; minor modifications to Permit PSD-FL-301A; and this current Title V revision to add Bayside Units 1 and 2. In addition, the deadline for submitting the Title V renewal application is July 5, 2004. If TECO submits a timely and complete Title V renewal application, it may be possible to time these projects such that the modifications to the PSD permit are completed first and then a single Title V renewal permit follows which incorporates these changes as well as the addition of Bayside Units 1 and 2 and the shutdown of the existing Gannon Units. Provide TECO's preferred schedule for these permit projects.

#### **TEC Response**

TEC agrees with the Department and prefers to have the modifications to the PSD permit completed first, and then have a single Title V renewal permit that follows and incorporates the modified PSD permit conditions, as well as the addition of Bayside Units 1 and 2, and the shutdown of the existing Gannon units. However, TEC would prefer to leave the simple cycle operation and limited oil firing for Bayside Unit 3 separate to avoid having this permit application hold up the issuance of the Title V permit.

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#### **EPCHC Items**

- i. EU-020 to 026-7 No emission factor is given for NOx in Section 6 and no calculation of emissions is shown in Section 8.
- ii. For CO (-9), PM (-11), PM10 (-13), SO2 (-15), SAM (-17), and VOC (-19), why is the emission factor given in Section 6 the same as the potential emissions in lb/hour given in Section 3 on EU-020 to 026? Emission factors are used to determine potential emissions, but normally don't have the same units as them.
- iii. There are no calculations of emissions shown in Section 8 for CO (-9), PM (-11), PM10 (-13), SAM (-17), and VOC (-19) on EU-020 to 026.
- iv. For PM(-11), PM10 (-13), SO2 (-15), and VOC (-19) on EU-020 to 026, why is the hourly rate used to calculate annual potential emissions in Section 8 lower than the potential lb/hour rate given in Section 3?

#### **TEC Response**

TEC has revised the pages of the application that relate to the potential emissions and calculations in Subsection F1 (Emissions Unit Pollutant Detail Information) for each emissions unit. There are no emission factors. The potential emission rates are all based upon General Electric (GE) Vendor data. Please see Attachment B.

TEC appreciates your consideration in this matter and if you have any questions, please call me at (813) 228-4302.

Sincerely,

Greer Briggs

**Environmental Engineer** 

Environmental, Health & Safety

EHS\bmr\GMB203

c/att: Mr. Jerry Kissel, FDEP-SWD

Mr. Jerry Campbell, EPCHC Mr. Jim Little, EPA Region 4

Mr. John Bunyak, NPS

# Attachment A Responsible Official Certification Professional Engineer Certification

I, the undersigned, am the responsible official as defined in Chapter 62-213, F.A.C., of the Title V source for which this document is being submitted. I hereby certify, based on the information and belief formed after reasonable inquiry, that the statements made and data contained in this document are true, accurate, and complete.

Worden Co Me	8/30/04
Signature	Date
Wade A. Maye	General Manager, Bayside Power Station
Name	Title

# TAMPA ELECTRIC COMPANY H.L. CULBREATH BAYSIDE POWER STATION REVISION OF TITLE V PERMIT NO. 0570040-017-AV ADDITION OF UNITS 1 AND 2

### **Professional Engineer Certification**

Professional Engineer Statement:
Floressional Engineer Statement.
I, the undersigned, hereby certify, except as particularly noted herein*, that:
(1) To the best of my knowledge, the information presented in the Tampa Electric Company (TEC) response to the Department's Request for Additional Information (RAI) dated June 4, 2004 concerning revisions to Title V Permit No. 0570040-017-AV, Addition of Units 1 and 2 are true, accurate, and complete based on my review of material provided by TEC engineering and environmental staff; and
(2) To the best of my knowledge, any emission estimates reported or relied on in this submittal are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of air pollutants not regulated for an emissions unit, based solely upon the materials, information and calculations provided with this certification.
Thom 2. Que 8/24/04
Signature Date

\* Certification is applicable to the Tampa Electric Company (TEC) response to the Department's Request for Additional Information (RAI) dated June 4, 2004 concerning revisions to Title V Permit No. 0570040-017-AV, addition of Units 1 and 2.

# Attachment B Revised Potential Emissions and Calculation pages

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(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions
Complete for each pollutant identified in Subsection E if applying for an air construction
permit or concurrent processing of an air construction permit and a revised or renewal

Potential Emissions:

Complete for each pollutant identified in Subsection E if applying for an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: NOX

2. Total Percent Efficiency of Control: N/A

3. Potential Emissions:

4. Synthetically Limited?

Yes No

2. 2 0 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	]	_						
3. Potential Emissions: 23.1 lb/hour 101.2	tons/year	4. Synthe	tically Limited?  No					
5. Range of Estimated Fugitive Emissions (as to tons/year	applicable):	<del>_</del>						
	Potential emissions calculated using permit allowable rates.  Method Code:							
Reference:  8. Calculation of Emissions:  Hourly emission rate (Field 3) is allowable rate pursuant to Air Permit No. PSD-FL-301A, Section III, Condition 14.c.  Annual Emissions = 23.1 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)  Annual Emissions = 101.2 ton/yr								
9. Pollutant Potential/Estimated Fugitive Emi	ssions Comment	::						

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(Optional for unregulated emissions units.)

### Potential/Estimated Fugitive Emissions

applying for an air operation permit.							
1. Pollutant Emitted: CO	2. Total Percent Efficiency of Control: N/A						
3. Potential Emissions:	4. S	ynthetically Limited?					
28.7 lb/hour 125.	7 tons/year [	Yes 🖄 No					
5. Range of Estimated Fugitive Emissions (as to tons/year	s applicable):						
6. Emission Factor: N/A		7. Emissions					
Potential emissions calculated using per	mit allowable rates.	Method Code:					
Reference:		0					
8. Calculation of Emissions:							
Hourly emission rate (Field 3) is allowable rate pursuant to Air Permit No. PSD-FL-301A, Section III, Condition 14.b.  Annual Emissions = 28.7 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)  Annual Emissions = 125.7 ton/yr							
9. Pollutant Potential/Estimated Fugitive Emi	ssions Comment:						

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(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions Complete for each pollutant identified in Sulpermit or concurrent processing of an air co Title V permit. Complete for each emissions applying for an air operation permit.	nstruction permit and a s-limited pollutant identi	revised or renewal fied in Subsection E if
1. Pollutant Emitted: PM	2. Total Percent Efficient	
	o tons/year Y	netically Limited? es 🛛 No
5. Range of Estimated Fugitive Emissions (as to tons/year	s applicable):	, <u> </u>
6. Emission Factor: N/A Potential emissions calculated using GE v Reference:	endor emission data.	7. Emissions Method Code: 2
8. Calculation of Emissions: Hourly emission rate (Field 3) is combus and 18°F ambient temperature.  Annual emissions (Field 3) based on comlb/hr) for 100 % load and 59°F ambient average annual temperature for Tampa  Annual Emissions = 20.3 lb/hr x 8,760 hr Annual Emissions = 88.9 ton/yr	nbustion turbine vendor temperature (conscrvati is 72°F). r/yr x (1 ton / 2,000 lb)	hourly data (20.3
9. Pollutant Potential/Estimated Fugitive Em	issions Comment:	

PM emissions represent filterable and condensable particulate matter as measured by

EPA Reference Methods 201 and 202.

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(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions
Complete for each pollutant identified in Subsection E if applying for an air construction
permit or concurrent processing of an air construction permit and a revised or renewal

Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit. 2. Total Percent Efficiency of Control: N/A 1. Pollutant Emitted: PM10 4. Synthetically Limited? 3. Potential Emissions: ⊠ No Yes 20.5 lb/hour 88.9 tons/year 5. Range of Estimated Fugitive Emissions (as applicable): tons/year 7. Emissions 6. Emission Factor: N/A Method Code: Potential emissions calculated using GE vendor emission data. 2 Reference: 8. Calculation of Emissions: Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature. Annual emissions (Field 3) based on combustion turbine vendor hourly data (20.3 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F). Annual Emissions =  $20.3 \text{ lb/hr} \times 8,760 \text{ hr/yr} \times (1 \text{ ton } / 2,000 \text{ lb})$ Annual Emissions = 88.9 ton/yr 9. Pollutant Potential/Estimated Fugitive Emissions Comment: PM emissions represent filterable and condensable particulate matter as measured by EPA Reference Methods 201 and 202. PM and PM10 emission rates are assumed to be equal.

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(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emission	Potential	/Estimated	<b>Fugitive</b>	<b>Emissions</b>
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applying for an air operation permit.									
1. Pollutant Emitted: SO2	ed: SO2  2. Total Percent Efficiency of Control: N/A								
3. Potential Emissions: 11.1 lb/hour 45.1	l tons/year	4. Synth	etically Limited?						
			,,,						
5. Range of Estimated Fugitive Emissions (as to tons/year	s applicable):								
6. Emission Factor: N/A			7. Emissions						
Potential emissions calculated using GE vendor emission data. Method Code:									
Reference:			2						
8. Calculation of Emissions:									
Hourly emission rate (Field 3) is combus	tion turbine ven	dor data	for 100 % load						
and 18°F ambient temperature.									
<u>-</u>									
Hourly Emissions = $(2.0 \text{ gr S} / 100 \text{ scf}) \text{ x}$ $(2 \text{ lb SO}_2 / \text{ lb S}) = 11.1 \text{ lb/hr}$	Hourly Emissions = $(2.0 \text{ gr S} / 100 \text{ scf}) \times (1.934 \times 10^6 \text{ ft}^3/\text{hr}) \times (1 \text{ lb S} / 7,000 \text{ gr S}) \times (2 \text{ lb SO}_2 / \text{lb S}) = 11.1 \text{ lb/hr}$								
Annual emissions (Field 3) based on com % load and 59°F ambient temperature (temperature for Tampa is 72°F).	Annual emissions (Field 3) based on combustion turbine vendor hourly data for 100 % load and 59°F ambient temperature (conservative estimate since average annual								
Annual Emissions = $(2.0 \text{ gr S} / 100 \text{ scf}) \text{ x}$ x $(2 \text{ lb SO}_2 / \text{ lb S}) = 10.3 \text{ lb/hr}$	$(1.806 \times 10^6 \text{ ft}^3/\text{l})$	hr) x (1 li	b S / 7,000 gr S)						
Annual Emissions = $10.3 \text{ lb/hr} \times 8,760 \text{ h}$	r/yr x (1 ton / 2,0	00 lb)							
Annual Emissions = 45.1 ton/yr		ŕ							
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9. Pollutant Potential/Estimated Fugitive Em	issions Comment:	<del></del>							

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(Optional for unregulated emissions units.)

Potential/	Estimated	<b>Fugitive</b>	<b>Emissions</b>

anı	olying for an air operation permit.						
	Pollutant Emitted: SAM	2. Total Perce	ent Efficie	ncy of Control: N/A			
	Potential Emissions:  2.0 lb/hour  8.3  Range of Estimated Fugitive Emissions (as	4. Synthetically Limited?  3 tons/year Yes No s applicable):					
	to tosimated rughtive Emissions (as	<u>арричасту</u> .					
	Emission Factor: N/A Potential emissions calculated using GE ve	endor emission	data.	7. Emissions Method Code: 2			
	ference:						
	Calculation of Emissions:  Hourly emission rate (Field 3) is combust and 18°F ambient temperature based on 4% conversion of SO <sub>2</sub> to SO <sub>3</sub> (SCR), and  Hourly Emissions = [(5.55 lb S / hr) x (8 / + [(11.1 lb SO <sub>2</sub> / hr) x (4 / 100) x (98 lb  Annual emissions (Field 3) based on com % load and 59°F ambient temperature (contemperature for Tampa is 72°F).	8% conversion 100% conversion (100) x (98 lb H H <sub>2</sub> SO <sub>4</sub> / 64 lb S bustion turbine conservative est	of fuel surion of SO <sub>2</sub> $I_2SO_4 / 32$ $SO_2 = 2$ . Evendor I	alfur to SO <sub>3</sub> (CT), to H <sub>2</sub> SO <sub>4</sub> .  Ib S] 0 lb/hr hourly data for 100 he average annual			
	Annual Emissions = [(5.15 lb S / hr) x (8 / + [(10.3 lb SO <sub>2</sub> / hr) x (4 / 100) x (98 lb Annual Emissions = 1.9 lb/hr x 8,760 hr/y Annual Emissions = 8.3 ton/yr	H <sub>2</sub> SO <sub>4</sub> / 64 lb S	$SO_2] = 1.$	2 lb S] 9 lb/hr			
9.	Pollutant Potential/Estimated Fugitive Emi	ssions Commen	t:				

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(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

applying for an air operation permit.								
1. Pollutant Emitted: VOC	2. Total Percent Efficiency of Control: N/A							
3. Potential Emissions:	4. Synth	etically Limited?						
	tons/year Y	es 🛛 No						
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year								
6. Emission Factor: N/A		7. Emissions						
Potential emissions calculated using GE v	endor emission data.	Method Code:						
Reference:		2						
8. Calculation of Emissions:								
Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.  Annual emissions (Field 3) based on combustion turbine vendor hourly data (2.8 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).  Annual Emissions = 2.8 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)  Annual Emissions = 12.3 ton/yr								
9. Pollutant Potential/Estimated Fugitive Emi	ssions Comment:							

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# F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions	Potential/Estimated	<b>Fugitive Emissions</b>
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	Pollutant Emitted: NOX	2. Total Perc	ent Efficie	ency of Control: N/A					
3.	Potential Emissions: 23.1 lb/hour 101.2	tons/year		netically Limited? es No					
5.	5. Range of Estimated Fugitive Emissions (as applicable): to tons/year								
6.	Emission Factor: N/A Potential emissions calculated using perm ference:	it allowable r	ates.	7. Emissions Method Code: 0					
	Calculation of Emissions:								
	Hourly emission rate (Field 3) is allowable rate pursuant to Air Permit No. PSD-FL-301A, Section III, Condition 14.c.  Annual Emissions = 23.1 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)  Annual Emissions = 101.2 ton/yr								
9.	Pollutant Potential/Estimated Fugitive Emiss	sions Commer	ıt:						

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# F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fu	igitive Emissions
------------------------	-------------------

	Pollutant Emitted: CO	2. Total Perc	ent Efficien	ncy of Control: N/A
3.	Potential Emissions: 28.7 lb/hour 125.7	tons/year	4. Synthe	tically Limited?  No
5.	Range of Estimated Fugitive Emissions (as to tons/year	applicable):		
6.	Emission Factor: N/A Potential emissions calculated using peri	nit allowable i		7. Emissions Method Code:
Re	ference:			
	Calculation of Emissions:  Hourly emission rate (Field 3) is allowable 301A, Section III, Condition 14.b.  Annual Emissions = 28.7 lb/hr x 8,760 hr Annual Emissions = 125.7 ton/yr	/yr x (1 ton / 2	,000 lb)	ermit No. PSD-FL-
9.	Pollutant Potential/Estimated Fugitive Emi	ssions Commer	nt:	

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(Optional for unregulated emissions units.)

	Pollutant Emitted: PM	2. Total Perce	ent Efficie	ncy of Control: N/A		
3.	Potential Emissions: 20.5 lb/hour 88.9	tons/year	4. Synth	etically Limited? es No		
5.	Range of Estimated Fugitive Emissions (as to tons/year	applicable):	·			
6.	Emission Factor: N/A Potential emissions calculated using GE ve	endor emission	data.	7. Emissions Method Code: 2		
Re	ference:					
<ul> <li>8. Calculation of Emissions: Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</li> <li>Annual emissions (Field 3) based on combustion turbine vendor hourly data (20.3 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</li> <li>Annual Emissions = 20.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb) Annual Emissions = 88.9 ton/yr</li> </ul>						
9. Pollutant Potential/Estimated Fugitive Emissions Comment:  PM emissions represent filterable and condensable particulate matter as measured by EPA Reference Methods 201 and 202.						

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(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions
Complete for each pollutant identified in Subsection E if applying for an air construction
pormit or concurrent processing of an air construction permit and a revised or renewal

Title V permit. Complete for each emission	ns-limited pollutant ident	ified in Subsection E if						
applying for an air operation permit.								
1. Pollutant Emitted: PM10	2. Total Percent Effici	ency of Control: N/A						
. Potential Emissions:  20.5 lb/hour  88.9 tons/year  4. Synthetically Limited?  Yes No								
5. Range of Estimated Fugitive Emissions (a to tons/year	as applicable):							
	6. Emission Factor: N/A Potential emissions calculated using GE vendor emission data.  7. Emissions Method Code:							
Reference:								
<ul> <li>8. Calculation of Emissions: Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</li> <li>Annual emissions (Field 3) based on combustion turbine vendor hourly data (20.3 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</li> <li>Annual Emissions = 20.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb) Annual Emissions = 88.9 ton/yr</li> </ul>								
<ol> <li>Pollutant Potential/Estimated Fugitive Emissions Comment:</li> <li>PM emissions represent filterable and condensable particulate matter as measured by EPA Reference Methods 201 and 202.</li> <li>PM and PM10 emission rates are assumed to be equal.</li> </ol>								

EMISSIONS UNIT INFORMATION Section [ 2 ] of [ 7 ]

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# F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

applying for an air operation permit.							
1. Pollutant Emitted: SO2	2. Total Perce		ncy of Control: N/A				
3. Potential Emissions:		4. Synth	etically Limited?				
11.1 lb/hour 45.1	tons/year	☐ Ye	es 🛛 No				
5. Range of Estimated Fugitive Emissions (as to tons/year	applicable):						
6. Emission Factor: N/A			7. Emissions				
Potential emissions calculated using GE v	endor emission	data.	Method Code:				
Reference:			2				
8. Calculation of Emissions:			_				
Hourly emission rate (Field 3) is combus	tion turbine vei	ndor data	for 100 % load				
and 18°F ambient temperature.							
Hourly Emissions = $(2.0 \text{ gr S} / 100 \text{ scf}) \times (1.934 \times 10^6 \text{ ft}^3/\text{hr}) \times (1 \text{ lb S} / 7,000 \text{ gr S}) \times (2 \text{ lb SO}_2 / \text{lb S}) = 11.1 \text{ lb/hr}$							
Annual emissions (Field 3) based on combustion turbine vendor hourly data for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).							
Annual Emissions = $(2.0 \text{ gr S} / 100 \text{ scf}) \times (1.806 \times 10^6 \text{ ft}^3/\text{hr}) \times (1 \text{ lb S} / 7,000 \text{ gr S}) \times (2 \text{ lb SO}_2 / \text{lb S}) = 10.3 \text{ lb/hr}$							
Annual Emissions = 10.3 lb/hr x 8,760 hr Annual Emissions = 45.1 ton/yr	r/yr x (1 ton / 2,	000 lb)					
9. Pollutant Potential/Estimated Fugitive Emi	ssions Commen	t:					

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(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions
Complete for each pollutant identified in Subsection E if applying for an air construction
permit or concurrent processing of an air construction permit and a revised or renewal

Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit. 2. Total Percent Efficiency of Control: N/A 1 Pollutant Emitted: SAM 4. Synthetically Limited? 3 Potential Emissions: No. ☐ Yes 8.3 tons/year 2.0 lb/hour 5. Range of Estimated Fugitive Emissions (as applicable): tons/year 7. Emissions 6. Emission Factor: N/A Method Code: Potential emissions calculated using GE vendor emission data. 2 Reference: 8. Calculation of Emissions: Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature based on 8% conversion of fuel sulfur to SO<sub>3</sub> (CT), 4% conversion of SO<sub>2</sub> to SO<sub>3</sub> (SCR), and 100% conversion of SO<sub>3</sub> to H<sub>2</sub>SO<sub>4</sub>. Hourly Emissions =  $[(5.55 \text{ lb S/hr}) \times (8/100) \times (98 \text{ lb H}_2\text{SO}_4/32 \text{ lb S}]$  $+ [(11.1 \text{ lb SO}_2/\text{hr}) \times (4/100) \times (98 \text{ lb H}_2\text{SO}_4/64 \text{ lb SO}_2] = 2.0 \text{ lb/hr}$ Annual emissions (Field 3) based on combustion turbine vendor hourly data for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F). Annual Emissions =  $[(5.15 \text{ lb S} / \text{hr}) \times (8 / 100) \times (98 \text{ lb H}_2\text{SO}_4 / 32 \text{ lb S}]$ +  $[(10.3 \text{ lb SO}_2/\text{hr}) \times (4/100) \times (98 \text{ lb H}_2\text{SO}_4/64 \text{ lb SO}_2] = 1.9 \text{ lb/hr}$ Annual Emissions =  $1.9 \text{ lb/hr} \times 8,760 \text{ hr/yr} \times (1 \text{ ton } / 2,000 \text{ lb})$ Annual Emissions = 8.3 ton/yr9. Pollutant Potential/Estimated Fugitive Emissions Comment:

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POLLUTANT DETAIL INFORMATION
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# F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

	llying for an air operation permit.			0.0			
1.	. Pollutant Emitted: VOC 2. Total Percent Efficiency of Control: N/A						
2	Potential Emissions:		4. Synth	etically Limited?			
٥.		tons/year	Ye T				
			<u></u>	23 110			
5.	Range of Estimated Fugitive Emissions (as to tons/year	applicable):					
	Emission Factor: N/A			7. Emissions			
		andar amissian	data	Method Code:			
	Potential emissions calculated using GE ve	enagi emissior	uata.	2			
Re	ference:			<u>.                                    </u>			
8.	Calculation of Emissions:						
	Hourly emission rate (Field 3) is combust and 18°F ambient temperature.  Annual emissions (Field 3) based on combust and 19°F ambient of average annual temperature for Tampa is Annual Emissions = 2.8 lb/hr x 8,760 hr/y Annual Emissions = 12.3 ton/yr	bustion turbin temperature (c is 72°F). yr x (1 ton / 2,0	e vendor l onservati	nourly data (2.8			
9.	Pollutant Potential/Estimated Fugitive Entis	SSIGHS COMME	ιι.				

EMISSIONS UNIT INFORMATION Section [ 3 ] of [ 7 ]

Potential/Estimated Fugitive Emissions

Annual Emissions = 101.2 ton/yr

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# F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Complete for each pollutant identified in Subpermit or concurrent processing of an air contile V permit. Complete for each emissions	nstruction permit and a	revised or renewal				
applying for an air operation permit.  1. Pollutant Emitted: NOX	2. Total Percent Effici	ency of Control: N/A				
3. Potential Emissions: 23.1 lb/hour 101.2		hetically Limited? 'es 🔀 No				
5. Range of Estimated Fugitive Emissions (as to tons/year	applicable):					
6. Emission Factor: N/A  Potential emissions calculated using per Reference:	mit allowable rates.	7. Emissions Method Code: 0				
8. Calculation of Emissions:						
Hourly emission rate (Field 3) is allowab 301A, Section III, Condition 14.c.	le rate pursuant to Air	Permit No. PSD-FL-				
Annual Emissions = $23.1 \text{ lb/hr x } 8,760 \text{ hr/yr x } (1 \text{ ton } / 2,000 \text{ lb})$						

EMISSIONS UNIT INFORMATION Section [ 3 ] of [ 7 ]

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# F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emission
---------------------------------------

1. Pollutant Emitted: CO	2. Total Percent Efficiency of Control: N/A
3. Potential Emissions: 28.7 lb/hour 125.7	4. Synthetically Limited?  tons/year ☐ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as to tons/year	
6. Emission Factor: N/A  Potential emissions calculated using perm Reference:	7. Emissions Method Code: 0
8. Calculation of Emissions:  Hourly emission rate (Field 3) is allowable 301A, Section III, Condition 14.b.  Annual Emissions = 28.7 lb/hr x 8,760 hr, Annual Emissions = 125.7 ton/yr	le rate pursuant to Air Permit No. PSD-FL-/yr x (1 ton / 2,000 lb)
9. Pollutant Potential/Estimated Fugitive Emis	ssions Comment:

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Potential/Estimated Fugitive Emissions

EPA Reference Methods 201 and 202.

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# F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

T Ottellan Estimated x against an annual		3 4				
Complete for each pollutant identified in Sub	section E if ap	plying for	an air construction			
permit or concurrent processing of an air con	istruction peri	mit and a	revised or renewal			
Title V permit. Complete for each emissions	-limited pollut	ant identii	fied in Subsection E ii			
applying for an air operation permit.			2.5. 1. 27/1			
1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: N/A					
3. Potential Emissions:		4. Synth	etically Limited?			
	tons/year	│ □ Ye	es 🛛 No			
5. Range of Estimated Fugitive Emissions (as to tons/year	applicable):					
6. Emission Factor: N/A			7. Emissions			
Potential emissions calculated using GE ve	endor emissior	ı data.	Method Code:			
Reference:			2			
<ul> <li>8. Calculation of Emissions: Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</li> <li>Annual emissions (Field 3) based on combustion turbine vendor hourly data (20.3 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</li> <li>Annual Emissions = 20.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb) Annual Emissions = 88.9 ton/yr</li> </ul>						
9. Pollutant Potential/Estimated Fugitive Emis			atter as measured by			

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### F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

1. Pollutant Emitted: PM10	2. Total Perce	cent Efficiency of Control: N/A						
3. Potential Emissions: 20.5 lb/hour 88.9	tons/year	4. Synthetically Limited? ☐ Yes ⊠ No						
5. Range of Estimated Fugitive Emissions (as to tons/year	s applicable):							
6. Emission Factor: N/A  Potential emissions calculated using GE v Reference:	Potential emissions calculated using GE vendor emission data.  Method Code:							
8. Calculation of Emissions: Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.  Annual emissions (Field 3) based on combustion turbine vendor hourly data (20.3 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).  Annual Emissions = 20.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb) Annual Emissions = 88.9 ton/yr								
<ol> <li>Pollutant Potential/Estimated Fugitive Emissions Comment:</li> <li>PM emissions represent filterable and condensable particulate matter as measured by EPA Reference Methods 201 and 202.</li> <li>PM and PM10 emission rates are assumed to be equal.</li> </ol>								

EMISSIONS UNIT INFORMATION Section [ 3 ] of [ 7 ]

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### F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

applying for an air operation permit.	
1. Pollutant Emitted: SO2	2. Total Percent Efficiency of Control: N/A
3. Potential Emissions:	4. Synthetically Limited?
	tons/year Yes 🖄 No
5. Range of Estimated Fugitive Emissions (as to tons/year	applicable):
6. Emission Factor: N/A	7. Emissions
Potential emissions calculated using GE v	endor emission data. Method Code:
Reference:	2
8. Calculation of Emissions: Hourly emission rate (Field 3) is combus and 18°F ambient temperature.  Hourly Emissions = (2.0 gr S / 100 scf) x x (2 lb SO <sub>2</sub> / lb S) = 11.1 lb/hr  Annual emissions (Field 3) based on com % load and 59°F ambient temperature (emperature for Tampa is 72°F).  Annual Emissions = (2.0 gr S / 100 scf) x x (2 lb SO <sub>2</sub> / lb S) = 10.3 lb/hr  Annual Emissions = 10.3 lb/hr x 8,760 hr  Annual Emissions = 45.1 ton/yr	(1.934 x 10 <sup>6</sup> ft <sup>3</sup> /hr) x (1 lb S / 7,000 gr S)  bustion turbine vendor hourly data for 100 conservative estimate since average annual  (1.806 x 10 <sup>6</sup> ft <sup>3</sup> /hr) x (1 lb S / 7,000 gr S)
9. Pollutant Potential/Estimated Fugitive Emi	ssions Comment:

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(Optional for unregulated emissions units.)

applying for an air operation permit.			
1. Pollutant Emitted: SAM	2. Total Perc	ent Efficie	ency of Control: N/A
3. Potential Emissions:		4. Synth	netically Limited?
	tons/year	Y	
5. Range of Estimated Fugitive Emissions (as			
to tons/year	application,		
6. Emission Factor: N/A			7. Emissions
Potential emissions calculated using GE v	endor emissior	ı data.	Method Code:
Reference:			2
8. Calculation of Emissions:			
Hourly emission rate (Field 3) is combus	tion turbine ve	ndor data	for 100 % load
and 18°F ambient temperature based on	8% conversion	a of fuel su	ılfur to SO3 (CT),
4% conversion of SO <sub>2</sub> to SO <sub>3</sub> (SCR), and	100% convers	sion of SO	3 to H <sub>2</sub> SO <sub>4</sub> .
Hourly Emissions = $[(5.55 \text{ lb S / hr}) \times (8 \text{ m})]$	′ 100) x (98 lb l	$H_2SO_4/32$	lb S]
+ $[(11.1 \text{ lb SO}_2 / \text{hr}) \times (4 / 100) \times (98 \text{ lb})]$	$H_2SO_4 / 64 lb$	$SO_2$ ] = 2.	0 lb/hr
Annual emissions (Field 3) based on com	bustion turbin	e vendor l	hourly data for 100
% load and 59°F ambient temperature (	conservative es	timate sin	ice average annual
temperature for Tampa is 72°F).			
Annual Emissions = $[(5.15 lb S / hr) x (8)]$	/ 100) x (98 lb	$H_2SO_4/32$	2 lb Sj
+ $[(10.3 \text{ lb } SO_2 / \text{hr}) \times (4 / 100) \times (98 \text{ lb})]$			.y ID/hr
Annual Emissions = $1.9 \text{ lb/hr } \times 8,760 \text{ hr/s}$	yr x (1 ton / 2,0	100 lb)	
Annual Emissions = 8.3 ton/yr			
9. Pollutant Potential/Estimated Fugitive Emi	ssions Commer	nt:	

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(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

apj	olying for an air operation permit.						
1.	Pollutant Emitted: VOC	2. Total Perc	ent Efficie	ency of Control: N/A			
3.	Potential Emissions: 3.0 lb/hour 12.3	tons/year	4. Synth	netically Limited? es No			
5.	Range of Estimated Fugitive Emissions (as to tons/year	applicable):					
6.	Emission Factor: N/A			7. Emissions			
	Potential emissions calculated using GE ve	e <mark>ndor emissi</mark> on	data.	Method Code:			
Re	ference:			2			
8.	Calculation of Emissions:						
Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.  Annual emissions (Field 3) based on combustion turbine vendor hourly data (2.8 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).  Annual Emissions = 2.8 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)  Annual Emissions = 12.3 ton/yr							
9.	Pollutant Potential/Estimated Fugitive Emis	sions Commen	t:				

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(Optional for unregulated emissions units.)

ap	plying for an air operation perimit.		·	<u></u>			
1.	Pollutant Emitted: NOX	2. Total Perc	ent Efficie	ency of Control: N/A			
7	Potential Emissions:		4. Synth	netically Limited?			
٠,		tons/year	. <u> </u>	es 🖄 No			
) <b>)</b> .	Range of Estimated Fugitive Emissions (as to tons/year	аррпсаоте):					
6.	Emission Factor: N/A			7. Emissions			
	Potential emissions calculated using perr	nit allowable r	ates.	Method Code:			
Re	ference:			0			
8.	Calculation of Emissions:						
Hourly emission rate (Field 3) is allowable rate pursuant to Air Permit No. PSD-FL-301A, Section III, Condition 14.c.  Annual Emissions = 23.1 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)  Annual Emissions = 101.2 ton/yr							
9.	9. Pollutant Potential/Estimated Fugitive Emissions Comment:						
	-						

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### F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

1.	Pollutant Emitted: CO	2. Total Perc	ent Efficiency of Control: N/A			
3.	Potential Emissions:			etically Limited?		
	28.7 lb/hour 125.7	tons/year	Y	es 🛛 No		
5.	Range of Estimated Fugitive Emissions (as to tons/year	applicable):				
6.	Emission Factor: N/A			7. Emissions		
	Potential emissions calculated using pern	nit allowable r	ates.	Method Code:		
Re	ference:			0		
8.	Calculation of Emissions:			·		
	Hourly emission rate (Field 3) is allowable rate pursuant to Air Permit No. PSD-FL-301A, Section III, Condition 14.b.  Annual Emissions = 28.7 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)  Annual Emissions = 125.7 ton/yr					
			<u> </u>			
9.	Pollutant Potential/Estimated Fugitive Emis	sions Commen	it:			

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# F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

1. Pollutant Emitted: PM  2. Total Percent Efficiency of Control: N/A							
3. Potential Emissions: 20.5 lb/hour 88.9	nthetically Limited? Yes No						
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year							
6. Emission Factor: N/A Potential emissions calculated using GE v	endor emission data.	7. Emissions Method Code: 2					
Reference:							
8. Calculation of Emissions: Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.  Annual emissions (Field 3) based on combustion turbine vendor hourly data (20.3 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).  Annual Emissions = 20.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb) Annual Emissions = 88.9 ton/yr							
9. Pollutant Potential/Estimated Fugitive Emi PM emissions represent filterable and co EPA Reference Methods 201 and 202.		matter as measured by					

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(Optional for unregulated emissions units.)

Potent	tial/Estim:	ated Fugi	tive Emi	ssions
rotem	1141 1 511111	aicu i uzi	LIVE LANGE	2210112

1. Pollutant Emitted: PM10		ent Efficiency of Control: N/A
3. Potential Emissions:		4. Synthetically Limited?
<b>20.5</b> lb/hour	88.9 tons/year	☐ Yes ⊠ No
5. Range of Estimated Fugitive	· · · · · · · · · · · · · · · · · · ·	
to tons/y	ear	
6. Emission Factor: N/A		7. Emissions
Potential emissions calculate	ed using GE vendor emission	Method Code:
Reference:	<u> </u>	
8. Calculation of Emissions:		
i ,	l 3) is combustion turbine ve	ndor data for 100 % load
and 18°F ambient tempera	ture.	
Annual emissions (Field 3)	based on combustion turbin	e vendor hourly data (20.3
lb/hr) for 100 % load and 5	59°F ambient temperature (c	onservative estimate since
average annual temperatur		
	/hr x 8,760 hr/yr x (1 ton / 2	000 lb) .
Annual Emissions = 88.9 to	on/yr	
9. Pollutant Potential/Estimated	1 Fugitive Emissions Commen	t·
9. Follutant Fotential/Estimated	Trugitive Linissions Commen	
PM emissions represent file	terable and condensable par	ticulate matter as measured by
EPA Reference Methods 20		•
PM and PM10 emission ra	tes are assumed to be equal.	

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### F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

### Potential/Estimated Fugitive Emissions

applying for an air operation permit.					
1. Pollutant Emitted: SO2	2. Total Percent Efficiency of Control: N/A				
3. Potential Emissions:		4. Synthetic	ally Limited?		
	tons/year	☐ Yes	🖄 No		
5. Range of Estimated Fugitive Emissions (as to tons/year	applicable):				
6. Emission Factor: N/A		7.	Emissions		
Potential emissions calculated using GE v	endor emission	data.	Method Code:		
Reference:			2		
8. Calculation of Emissions: Hourly emission rate (Field 3) is combus and 18°F ambient temperature.  Hourly Emissions = (2.0 gr S / 100 scf) x x (2 lb SO <sub>2</sub> / lb S) = 11.1 lb/hr  Annual emissions (Field 3) based on com % load and 59°F ambient temperature (extemperature for Tampa is 72°F).  Annual Emissions = (2.0 gr S / 100 scf) x x (2 lb SO <sub>2</sub> / lb S) = 10.3 lb/hr Annual Emissions = 10.3 lb/hr x 8,760 hr Annual Emissions = 45.1 ton/yr	$(1.934 \times 10^6 \text{ ft}^3)$ bustion turbing conservative es $(1.806 \times 10^6 \text{ ft}^3)$	hr) x (1 lb S / e vendor hour timate since a hr) x (1 lb S /	7,000 gr S)  Ply data for 100 overage annual		
9. Pollutant Potential/Estimated Fugitive Emi	ssions Commen	t:			

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(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions
--

applying for an air operation permit.	-mmteu ponut	ant inenti	ned in Subsection E i
1. Pollutant Emitted: SAM	2. Total Perce	ent Efficie	ency of Control: N/A
3. Potential Emissions: 2.0 lb/hour 8.3	tons/year	_ <u></u>	netically Limited? es 🛛 No
5. Range of Estimated Fugitive Emissions (as to tons/year	applicable):		
6. Emission Factor: N/A	andar amissian	data	7. Emissions Method Code:
Potential emissions calculated using GE v Reference:	endor emission	uata.	wiethod Code.
Hourly emission rate (Field 3) is combust and 18°F ambient temperature based on 4% conversion of SO <sub>2</sub> to SO <sub>3</sub> (SCR), and Hourly Emissions = [(5.55 lb S / hr) x (8 / + [(11.1 lb SO <sub>2</sub> / hr) x (4 / 100) x (98 lb Annual emissions (Field 3) based on com % load and 59°F ambient temperature (converge temperature for Tampa is 72°F).  Annual Emissions = [(5.15 lb S / hr) x (8 / + [(10.3 lb SO <sub>2</sub> / hr) x (4 / 100) x (98 lb Annual Emissions = 1.9 lb/hr x 8,760 hr/y	8% conversion 100% conversion 100) x (98 lb H H <sub>2</sub> SO <sub>4</sub> / 64 lb S bustion turbing conservative est (100) x (98 lb H H <sub>2</sub> SO <sub>4</sub> / 64 lb S	of fuel states of SO $[2SO_4/32]$ $[2SO_4/32]$ evendor laimate sin $[2SO_4/32]$ $[2SO_4/32]$ $[2SO_4/32]$	alfur to SO <sub>3</sub> (CT), 3 to H <sub>2</sub> SO <sub>4</sub> .  Ib S] 0 lb/hr hourly data for 100 hoe average annual
Annual Emissions = 8.3 ton/yr  9. Pollutant Potential/Estimated Fugitive Emis	ssions Comment	:	

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#### F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

#### Potential/Estimated Fugitive Emissions

_	blying for an air operation permit.		<del></del>			
1.	Pollutant Emitted: VOC	VOC 2. Total Percent Efficiency of Control: N/A				
3	Potential Emissions:	·	4. Synth	etically Limited?		
J.		tons/year	Ŭ Ye			
5.	Range of Estimated Fugitive Emissions (as to tons/year	applicable):				
6.	Emission Factor: N/A			7. Emissions		
	Potential emissions calculated using GE ve	endor emission	data.	Method Code:		
	ference:			2		
8.	Calculation of Emissions:					
	Hourly emission rate (Field 3) is combust and 18°F ambient temperature.  Annual emissions (Field 3) based on combust average annual temperature for Tampa i  Annual Emissions = 2.8 lb/hr x 8,760 hr/y  Annual Emissions = 12.3 ton/yr	oustion turbin emperature (c s 72°F).	e vendor l onservativ	nourly data (2.8		
0	Pollutant Potential/Estimated Fugitive Emis	sions Commen				
, , , , , , , , , , , , , , , , , , ,	Tonutant Totellia / Estimated Tugliffe Entis					

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(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

	Pollutant Emitted: NOX	2. Total Perc	ent Efficie	ency of Control: N/A			
3.	Potential Emissions: 23.1 lb/hour 101.2	tons/year		netically Limited? es 🛛 No			
5.	Range of Estimated Fugitive Emissions (as to tons/year	applicable):					
6.	Emission Factor: N/A	nit allowable r	ates	7. Emissions Method Code:			
Re	Potential emissions calculated using pern ference:	iiii anowabie i	aiçs.	0			
8.	Calculation of Emissions:		•	,			
	Hourly emission rate (Field 3) is allowable rate pursuant to Air Permit No. PSD-FL-301A, Section III, Condition 14.c.  Annual Emissions = 23.1 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)  Annual Emissions = 101.2 ton/yr						
:							
9.	Pollutant Potential/Estimated Fugitive Emis	sions Commen	t:				

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#### F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potentia	l/Estimated	l Fugitive	Emissions
rinema	II I NIEHLUICU		Lilliantonia

ap	plying for an air operation permit.							
1.	. Pollutant Emitted: CO  2. Total Percent Efficiency of Control: N/A							
2	Potential Emissions:		4 Synth	etically Limited?				
3.		tomalisa						
		tons/year		es 🔯 140				
5.	Range of Estimated Fugitive Emissions (as to tons/year	applicable):		100000				
6.	Emission Factor: N/A			7. Emissions				
Ŭ.	Potential emissions calculated using peri	mit allowable i	rates	Method Code:				
		int anowasie i	utcs.	0				
Re	ference:			0				
8	Calculation of Emissions:	<del></del>						
	8. Calculation of Emissions:  Hourly emission rate (Field 3) is allowable rate pursuant to Air Permit No. PSD-FL-301A, Section III, Condition 14.b.  Annual Emissions = 28.7 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)  Annual Emissions = 125.7 ton/yr							
9.	Pollutant Potential/Estimated Fugitive Emis	ssions Commer	it:					

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(Optional for unregulated emissions units.)

#### Potential/Estimated Fugitive Emissions

.ap	plying for an air operation permit.			
1.	Pollutant Emitted: PM	2. Total Perc	ent Efficie	ency of Control: N/A
3	Potential Emissions:		4 Synth	netically Limited?
٥.		tons/year		es No
			<u> </u>	
5.	Range of Estimated Fugitive Emissions (as	applicable):		
•	to tons/year			
6.	Emission Factor: N/A			7. Emissions
	Potential emissions calculated using GE ve	endor emission	data.	Method Code:
Re	ference:			2
8.	Calculation of Emissions:			
	Hourly emission rate (Field 3) is combust	ion turbine vei	ndor data	for 100 % load
	and 18°F ambient temperature.			
	•			· ·
	Annual emissions (Field 3) based on comb	oustion turbine	e vendor l	ourly data (20.3
	lb/hr) for 100 % load and 59°F ambient to			•
	average annual temperature for Tampa is	• `		
		)-		
	Annual Emissions = 20.3 lb/hr x 8,760 hr/	vr x (1 ton / 2.0	000 lb)	
	Annual Emissions = 88.9 ton/yr	J. A (1 tom / 2,	000 10)	
	Timuu Diilosions ooly tonyi			
9.	Pollutant Potential/Estimated Fugitive Emis	sions Comment	t:	
	C			
	PM emissions represent filterable and con	idensable part	iculate m	atter as measured by
	EPA Reference Methods 201 and 202.		<b></b>	
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(Optional for unregulated emissions units.)

#### Potential/Estimated Fugitive Emissions

1. Pollutant Emitted: PM10	2. Total Percent Efficiency of Co	ontrol: N/A
3. Potential Emissions: 20.5 lb/hour 88.9	4. Synthetically L	
5. Range of Estimated Fugitive Emissions (as to tons/year		
6. Emission Factor: N/A Potential emissions calculated using GE v Reference:	endor emission data.  7. Emis Meth	ssions nod Code: 2
8. Calculation of Emissions: Hourly emission rate (Field 3) is combus and 18°F ambient temperature.  Annual emissions (Field 3) based on com lb/hr) for 100 % load and 59°F ambient average annual temperature for Tampa  Annual Emissions = 20.3 lb/hr x 8,760 hr Annual Emissions = 88.9 ton/yr	bustion turbine vendor hourly da temperature (conservative estimatis 72°F).	ta (20.3
9. Pollutant Potential/Estimated Fugitive Emi PM emissions represent filterable and co EPA Reference Methods 201 and 202.  PM and PM10 emission rates are assume	ondensable particulate matter as n	neasured by

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#### F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

#### Potential/Estimated Fugitive Emissions

applying for an air operation permit.		_					
1. Pollutant Emitted: SO2	2. Total Perce	ent Efficie	ency of Control: N/A				
3. Potential Emissions:		4 Synth	netically Limited?				
	i.1 tons/year	7. Synu.					
			cs				
5. Range of Estimated Fugitive Emissions (	as applicable):						
to tons/year							
6. Emission Factor: N/A			7. Emissions				
Potential emissions calculated using GE	vendor emission	data.	Method Code:				
Reference:		!	2				
8. Calculation of Emissions:							
Hourly emission rate (Field 3) is combi	istion turbine vei	ndor data	for 100 % load				
and 18°F ambient temperature.							
and to I ambient temperature.							
Hourly Emissions = (2.0 gr S / 100 scf)	v (1 934 v 10 <sup>6</sup> ft <sup>3</sup> /	hr) v (1 l <del>)</del>	S / 7 000 or S)				
$x (2 \text{ lb } SO_2 / \text{ lb } S) = 11.1 \text{ lb/hr}$	x (1.934 x 10 11 /	111) X (1 11	7.57 7,000 gt 5)				
$X(2 \text{ 10 SO}_2/10 \text{ S}) = 11.1 \text{ 10/Hz}$							
A 1 1 (17) 114) hard are			l data fan 100				
Annual emissions (Field 3) based on co			= :				
% load and 59°F ambient temperature	(conservative est	timate sin	ce average annual				
temperature for Tampa is 72°F).							
	4 1						
Annual Emissions = (2.0 gr S / 100 scf)	x (1.806 x 10° ft <sup>3</sup> /	/hr) x (1 ll	b S / 7,000 gr S)				
$x (2 lb SO_2 / lb S) = 10.3 lb/hr$							
Annual Emissions = $10.3 \text{ lb/hr} \times 8,760 \text{ l}$	nr/yr x (1 ton / 2,0	000 lb)					
Annual Emissions = 45.1 ton/yr							
•							
O Pallutant Potantial/Estimated Excitive En	rissions Comment	· ·					
9. Pollutant Potential/Estimated Fugitive Er	nssions Commen	١.					

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(Optional for unregulated emissions units.)

Potential/Estimated F	Fugitive	<b>Emissions</b>
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	. Pollutant Emitted: SAM  2. Total Percent Efficiency of Control: N/A							
3.	Potential Emissions: 2.0 lb/hour 8.3	tons/year		netically Limited? es 🛛 No				
5.	Range of Estimated Fugitive Emissions (as to tons/year	applicable):						
	Emission Factor: N/A Potential emissions calculated using GE v ference:	endor emission	ı data.	7. Emissions Method Code: 2				
8.	Hourly emission rate (Field 3) is combust and 18°F ambient temperature based on 4% conversion of SO <sub>2</sub> to SO <sub>3</sub> (SCR), and Hourly Emissions = [(5.55 lb S / hr) x (8 / + [(11.1 lb SO <sub>2</sub> / hr) x (4 / 100) x (98 lb Annual emissions (Field 3) based on com % load and 59°F ambient temperature (extemperature for Tampa is 72°F).  Annual Emissions = [(5.15 lb S / hr) x (8 + [(10.3 lb SO <sub>2</sub> / hr) x (4 / 100) x (98 lb Annual Emissions = 1.9 lb/hr x 8,760 hr/Annual Emissions = 8.3 ton/yr	8% conversion 100% conversion 100) x (98 lb l H <sub>2</sub> SO <sub>4</sub> / 64 lb l bustion turbin conservative es / 100) x (98 lb l H <sub>2</sub> SO <sub>4</sub> / 64 lb yr x (1 ton / 2,0	of fuel sision of SO $H_2SO_4/32$ $SO_2] = 2.5$ where vendor bettimate simple stimate simple $H_2SO_4/32$ $SO_2] = 1.5$ $SO_2] = 1.5$ $SO_2D_3 = 1.5$	alfur to SO <sub>3</sub> (CT), Is to H <sub>2</sub> SO <sub>4</sub> . It b S  It is one of the content of the con				
9.	Pollutant Potential/Estimated Fugitive Emi	ssions Commer	nt:					

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### F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

applying for an air operation permit.							
1. Pollutant Emitted: VOC	2. Total Perce	ent Efficie	ncy of Control: N/A				
3. Potential Emissions:		4. Synth	etically Limited?				
5. Range of Estimated Fugitive Emissions (as to tons/year	applicable):						
6. Emission Factor: N/A			7. Emissions				
Potential emissions calculated using GE v	endor emission	data.	Method Code:				
Reference:			2				
8. Calculation of Emissions:							
Hourly emission rate (Field 3) is combus and 18°F ambient temperature.  Annual emissions (Field 3) based on com lb/hr) for 100 % load and 59°F ambient average annual temperature for Tampa  Annual Emissions = 2.8 lb/hr x 8,760 hr/Annual Emissions = 12.3 ton/yr	bustion turbine temperature (co is 72°F). yr x (1 ton / 2,00	e vendor l onservativ	nourly data (2.8				

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### F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emi
----------------------------------

	Pollutant Emitted: NOX	2. Total Perc	ent Efficie	ency of Control: N/A
3.	Potential Emissions: 23.1 lb/hour 101.2	tons/year	4. Synth	netically Limited? es 🛛 No
5.	Range of Estimated Fugitive Emissions (as to tons/year	applicable):		
	Emission Factor: N/A Potential emissions calculated using perr	nit allowable r	ates.	7. Emissions Method Code:
Re	ference:			<u> </u>
	Calculation of Emissions:  Hourly emission rate (Field 3) is allowable 301A, Section III, Condition 14.c.  Annual Emissions = 23.1 lb/hr x 8,760 hr. Annual Emissions = 101.2 ton/yr	/yr x (1 ton / 2,	,000 lb)	Permit No. PSD-FL-
9.	Pollutant Potential/Estimated Fugitive Emis	ssions Commer	it:	

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(Optional for unregulated emissions units.)

Potential/Estimated Fi	ugitive	Emissions
------------------------	---------	-----------

	Pollutant Emitted: CO	2. Total Perc	ent Efficie	ency of Control: N/A		
3.	Potential Emissions: 28.7 lb/hour 125.7	tons/year	4. Synth	netically Limited? es 🛛 No		
5.	Range of Estimated Fugitive Emissions (as to tons/year	applicable):				
	Emission Factor: N/A Potential emissions calculated using pern ference:	nit allowable r	ates.	7. Emissions Method Code: 0		
	Calculation of Emissions:	<u> </u>				
	Hourly emission rate (Field 3) is allowable rate pursuant to Air Permit No. PSD-FL-301A, Section III, Condition 14.b.  Annual Emissions = 28.7 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)  Annual Emissions = 125.7 ton/yr					
İ						
9.	Pollutant Potential/Estimated Fugitive Emis	ssions Commen	it:			

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### F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Pollutant Emitted: PM	2. Total Percent l	Efficiency of Control: N/A
3. Potential Emissions: 20.5 lb/hour 88.9	tons/year 4.	Synthetically Limited?  Yes No
5. Range of Estimated Fugitive Emissions (as to tons/year	applicable):	
6. Emission Factor: N/A Potential emissions calculated using GE v Reference:	endor emission dat	7. Emissions Method Code: 2
<ul> <li>8. Calculation of Emissions:         Hourly emission rate (Field 3) is combust and 18°F ambient temperature.     </li> <li>Annual emissions (Field 3) based on com lb/hr) for 100 % load and 59°F ambient average annual temperature for Tampa</li> <li>Annual Emissions = 20.3 lb/hr x 8,760 hr Annual Emissions = 88.9 ton/yr</li> </ul>	bustion turbine ve temperature (const is 72°F).	ndor hourly data (20.3 ervative estimate since
9. Pollutant Potential/Estimated Fugitive Emi PM emissions represent filterable and co EPA Reference Methods 201 and 202.		late matter as measured by

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(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions
Complete for each pollutant identified in Subsection E if applying for an air construction
permit or concurrent processing of an air construction permit and a revised or renewal

permit or concurrent processing of an air co	nstruction per	mit and a	revised or renewal				
Title V permit. Complete for each emissions	-nmitea ponut	ant identi	neu in Subsection E ii				
applying for an air operation permit.  1. Pollutant Emitted: PM10	2. Total Percent Efficiency of Control: N/.						
1. Tonutant Emitted. Tivito	2. 10.	*	,				
3. Potential Emissions:	4. Synthetically Limited?						
	tons/year	Y	es 🛛 No				
5. Range of Estimated Fugitive Emissions (as to tons/year	applicable):						
6. Emission Factor: N/A			7. Emissions				
Potential emissions calculated using GE v	endor emissioi	ı data.	Method Code:				
Reference:			2				
8. Calculation of Emissions:							
Hourly emission rate (Field 3) is combus	tion turbine ve	ndor data	for 100 % load				
and 18°F ambient temperature.							
Annual emissions (Field 3) based on com	bustion turbin	e vendor l	hourly data (20.3				
lb/hr) for 100 % load and 59°F ambient	temperature (c	onservati	ve estimate since				
average annual temperature for Tampa	is 72°F).						
20.2 th/lener 9.760 ha	Jerus V (1 +022 / 3	000 16)					
Annual Emissions = 20.3 lb/hr x 8,760 hr Annual Emissions = 88.9 ton/yr	/yr x (1 ton / 2	,000 10)					
Annual Emissions – 66.7 tomy							
9. Pollutant Potential/Estimated Fugitive Emi	ssions Commer	nt:					
	1	.tilata w	sattan as massurad by				
PM emissions represent filterable and co EPA Reference Methods 201 and 202.	PM emissions represent filterable and condensable particulate matter as measured by						
EPA Reference Methods 201 and 202.							
PM and PM10 emission rates are assum	ed to be equal.						
	-						

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### F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emission	Potentia	l/Estimated	Fugitive	<b>Emissions</b>
---------------------------------------	----------	-------------	----------	------------------

1 to form of an areation normit	•	
applying for an air operation permit.	2. Total Percent Effici	oney of Control: N/A
1. Pollutant Emitted: SO2	2. Total Percent Effici	ency of Control. 14/A
<u> </u>		
3. Potential Emissions:	1	hetical <u>ly</u> Limited?
	tons/year	es 🛛 No
5. Range of Estimated Fugitive Emissions (as	applicable):	
to tons/year	-FF	
		7. Emissions
6. Emission Factor: N/A	andon omission data	Method Code:
Potential emissions calculated using GE v	endor emission data.	2
Reference:		
8. Calculation of Emissions:		
Hourly emission rate (Field 3) is combust	tion turbine vendor dat	a for 100 % load
and 18°F ambient temperature.		
-		
Hourly Emissions = $(2.0 \text{ gr S} / 100 \text{ scf}) \text{ x}$	(1.934 x 10 <sup>6</sup> ft <sup>3</sup> /hr) x (1 i	lb S / 7,000 gr S)
$x (2 lb SO_2 / lb S) = 11.1 lb/hr$	`	
A (2 10 502) 15 5)		
Annual emissions (Field 3) based on com	bustion turbine vendor	hourly data for 100
% load and 59°F ambient temperature (	onservative estimate si	nce average annual
temperature for Tampa is 72°F).		<b>&amp;</b>
temperature for xampa is 72 1).		
Annual Emissions = (2.0 gr S / 100 scf) x	(1.806 x 10 <sup>6</sup> ft <sup>3</sup> /hr) x (1.	lh S / 7.000 gr S)
Annual Emissions – (2.0 gr 5 / 100 scr) x	(1.000 x 10 10/111) x (1	10 01 19000 8. 01
x (2 lb SO2 / lb S) = 10.3 lb/hr	/vm v (1 ton / 2 000 lb)	
Annual Emissions = 10.3 lb/hr x 8,760 hr	/yr x (1 ton / 2,000 lb)	
Annual Emissions = 45.1 ton/yr		
9. Pollutant Potential/Estimated Fugitive Emi	ssions Comment:	
]		

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#### F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

	Pollutant Emitted: SAM	2. Total Perc	ent Efficie	ency of Control: N/A
3.	Potential Emissions: 2.0 lb/hour 8.3	tons/year		netically Limited? es 🛛 No
5.	Range of Estimated Fugitive Emissions (as to tons/year	applicable):		
	Emission Factor: N/A Potential emissions calculated using GE verterence:	endor emission	ı data.	7. Emissions Method Code: 2
8.	Calculation of Emissions:  Hourly emission rate (Field 3) is combust and 18°F ambient temperature based on 4% conversion of SO <sub>2</sub> to SO <sub>3</sub> (SCR), and  Hourly Emissions = [(5.55 lb S / hr) x (8 / + [(11.1 lb SO <sub>2</sub> / hr) x (4 / 100) x (98 lb  Annual emissions (Field 3) based on com % load and 59°F ambient temperature (at temperature for Tampa is 72°F).  Annual Emissions = [(5.15 lb S / hr) x (8 + [(10.3 lb SO <sub>2</sub> / hr) x (4 / 100) x (98 lb Annual Emissions = 1.9 lb/hr x 8,760 hr/Annual Emissions = 8.3 ton/yr	8% conversion 100% conversion 100% conversion $(100) \times (98 \text{ lb})$ H <sub>2</sub> SO <sub>4</sub> / 64 lb bustion turbin conservative es $(100) \times (98 \text{ lb})$ H <sub>2</sub> SO <sub>4</sub> / 64 lb	of fuel sision of SO $H_2SO_4 / 32$ $SO_2] = 26$ the vendor is stimate sim $H_2SO_4 / 32$ $SO_2] = 1$	ulfur to SO <sub>3</sub> (CT),  13 to H <sub>2</sub> SO <sub>4</sub> .  2 lb S]  10 lb/hr  11 hourly data for 100 hace average annual  2 lb S]
9.	Pollutant Potential/Estimated Fugitive Emi	ssions Commen	nt:	

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### F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

1. Pollutant Emitt	ed: VOC		2. Total Perc	cent Efficie	ency of Control: N/A
3. Potential Emiss	sions:				netically Limited?
	3.0 lb/hour	12.3	tons/year	☐ Y	es 🛛 No
5. Range of Estin	nated Fugitive Emis tons/year	sions (as	applicable):		
6. Emission Facto					7. Emissions
Potential emiss	ions calculated usi	ing GE ve	endor emissio	n data.	Method Code:
Reference:					2
8. Calculation of	Emissions:		·		
and 18°F amb Annual emissi lb/hr) for 100 average annu Annual Emiss Annual Emiss	on rate (Field 3) is ident temperature.  ions (Field 3) based % load and 59°F at al temperature for sions = 2.8 lb/hr x 8 idens = 12.3 ton/yr	d on coml ambient t Tampa i 3,760 hr/y	bustion turbin emperature (d s 72°F). /r x (1 ton / 2,0	ie vendor l conservati 000 lb)	hourly data (2.8
9. Pollutant Poter	ntial/Estimated Fugi	mve Emis	ssions Comme	iit.	

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(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

app	lying for an air operation permit.		
	Pollutant Emitted: NOX	2. Total Perc	cent Efficiency of Control: N/A
3	Potential Emissions:	·	4. Synthetically Limited?
٥.		tons/year	Yes 🖾 No
5.	Range of Estimated Fugitive Emissions (as to tons/year	h	
6.	Emission Factor: N/A Potential emissions calculated using peri	nit allowable r	7. Emissions Method Code:
Ref	ference:		0
8.	Calculation of Emissions:		
	Hourly emission rate (Field 3) is allowab 301A, Section III, Condition 14.c. Annual Emissions = 23.1 lb/hr x 8,760 hr Annual Emissions = 101.2 ton/yr	/yr x (1 ton / 2,	,000 lb)
9.	Pollutant Potential/Estimated Fugitive Emi	ssions Commen	nt:

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(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

1 · n	ing for an air operation permit.	2 Total Parc	ant Efficie	ency of Control: N/A
1. PC	ollutant Emitted: CO	2. Total Fere	CIII LIIICN	chey of Control. 1471
3. Po	otential Emissions: 28.7 lb/hour 125.7	tons/year	. <u> </u>	netically Limited? es
5. R	ange of Estimated Fugitive Emissions (as to tons/year	applicable):		
	mission Factor: N/A otential emissions calculated using perm	nit allowable 1	ates.	7. Emissions Method Code:
Refer	ence:	<u> </u>		0
8. C	alculation of Emissions:	· · · · · · · · · · · · · · · · · · ·		
30 A	ourly emission rate (Field 3) is allowable of the control of the c			Permit No. PSD-FL-

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(Optional for unregulated emissions units.)

Potential/Estimated	Engitive	Emissions
Potentiai/r.stuniateu	rugiuve	DHH22HAH2

1. Pollutant Emitted: PM	2. Total Perce	ent Efficiency of Contro	ol: N/A
3. Potential Emissions: 20.5 lb/hour 88.9	tons/year	4. Synthetically Limi ☐ Yes ☒ No	ted?
5. Range of Estimated Fugitive Emissions (as to tons/year	applicable):		
6. Emission Factor: N/A Potential emissions calculated using GE v	endor emission	7. Emissio Method	
Reference:			
<ul> <li>8. Calculation of Emissions:         Hourly emission rate (Field 3) is combust and 18°F ambient temperature.     </li> <li>Annual emissions (Field 3) based on com lb/hr) for 100 % load and 59°F ambient average annual temperature for Tampa Annual Emissions = 20.3 lb/hr x 8,760 hr Annual Emissions = 88.9 ton/yr</li> </ul>	bustion turbing temperature (co is 72°F). /yr x (1 ton / 2,	e vendor hourly data ( conservative estimate s ,000 lb)	20.3
9. Pollutant Potential/Estimated Fugitive Emi PM emissions represent filterable and co EPA Reference Methods 201 and 202.			sured by

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(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

applying for an air operation permit.		
1. Pollutant Emitted: PM10	2. Total Percent Efficient	ency of Control: N/A
3. Potential Emissions:	4. Synti	netically Limited?
	I	es 🖄 No
5. Range of Estimated Fugitive Emissions (a to tons/year	s applicable):	
6. Emission Factor: N/A		7. Emissions
Potential emissions calculated using GE v	endor emission data.	Method Code:
Reference:		2
8. Calculation of Emissions:		
Hourly emission rate (Field 3) is combust and 18°F ambient temperature.  Annual emissions (Field 3) based on combb/hr) for 100 % load and 59°F ambient average annual temperature for Tampa  Annual Emissions = 20.3 lb/hr x 8,760 hr Annual Emissions = 88.9 ton/yr	abustion turbine vendor l temperature (conservati is 72°F). r/yr x (1 ton / 2,000 lb)	hourly data (20.3
9. Pollutant Potential/Estimated Fugitive Em	issions Comment:	
PM emissions represent filterable and co EPA Reference Methods 201 and 202. PM and PM10 emission rates are assum		atter as measured by
	<u> </u>	

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(Optional for unregulated emissions units.)

	P	otential/	Estimated	<b>Fugitive</b>	<b>Emissions</b>
--	---	-----------	-----------	-----------------	------------------

applying for an air operation permit.			
1. Pollutant Emitted: SO2	2. Total Perc	ent Efficie	ency of Control: N/A
3. Potential Emissions:		4. Synth	netically Limited?
	1 tons/year	Y	
5. Range of Estimated Fugitive Emissions (a to tons/year	s applicable):		
6. Emission Factor: N/A			7. Emissions
Potential emissions calculated using GE	vendor emissior	ı data.	Method Code:
Reference:			2
8. Calculation of Emissions: Hourly emission rate (Field 3) is combus and 18°F ambient temperature.  Hourly Emissions = (2.0 gr S / 100 scf) x x (2 lb SO <sub>2</sub> / lb S) = 11.1 lb/hr  Annual emissions (Field 3) based on com % load and 59°F ambient temperature temperature for Tampa is 72°F).  Annual Emissions = (2.0 gr S / 100 scf) x x (2 lb SO <sub>2</sub> / lb S) = 10.3 lb/hr  Annual Emissions = 10.3 lb/hr x 8,760 h  Annual Emissions = 45.1 ton/yr	(1.934 x $10^6$ ft <sup>3</sup> )  abustion turbin (conservative est)  x (1.806 x $10^6$ ft <sup>3</sup> )	/hr) x (1 ll e vendor l timate sin	b S / 7,000 gr S) hourly data for 100 ace average annual
9. Pollutant Potential/Estimated Fugitive Em	issions Commen	it:	

EMISSIONS UNIT INFORMATION Section [ 7 ] of [ 7 ]

POLLU	JTAN]	CDET.	AIL	INFO	RMATION
Page	1 11	] of	[	14	]

#### F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions
--

applying for an air operation permit.					
1. Pollutant Emitted: SAM	2. Total Percent	Efficiency of Co	ntrol: N/A		
3. Potential Emissions:	4.	Synthetically L	imited?		
	tons/year	Yes 🖄 ì	No		
5. Range of Estimated Fugitive Emissions (as to tons/year	applicable):				
6. Emission Factor: N/A		7. Emis	sions		
Potential emissions calculated using GE v	endor emission da	ata. Meth	od Code:		
Reference:			2		
8. Calculation of Emissions: Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature based on 8% conversion of fuel sulfur to SO <sub>3</sub> (CT), 4% conversion of SO <sub>2</sub> to SO <sub>3</sub> (SCR), and 100% conversion of SO <sub>3</sub> to H <sub>2</sub> SO <sub>4</sub> .  Hourly Emissions = [(5.55 lb S / hr) x (8 / 100) x (98 lb H <sub>2</sub> SO <sub>4</sub> / 32 lb S] + [(11.1 lb SO <sub>2</sub> / hr) x (4 / 100) x (98 lb H <sub>2</sub> SO <sub>4</sub> / 64 lb SO <sub>2</sub> ] = 2.0 lb/hr  Annual emissions (Field 3) based on combustion turbine vendor hourly data for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).  Annual Emissions = [(5.15 lb S / hr) x (8 / 100) x (98 lb H <sub>2</sub> SO <sub>4</sub> / 32 lb S] + [(10.3 lb SO <sub>2</sub> / hr) x (4 / 100) x (98 lb H <sub>2</sub> SO <sub>4</sub> / 64 lb SO <sub>2</sub> ] = 1.9 lb/hr Annual Emissions = 1.9 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb) Annual Emissions = 8.3 ton/yr					
9. Pollutant Potential/Estimated Fugitive Emi	ssions Comment:				

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POLLUTANT DETAIL INFORMATION
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### F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

applying for an air operation permit.			
1. Pollutant Emitted: VOC	2. Total Perce	nt Efficie	ncy of Control: N/A
3. Potential Emissions:		4. Synth	etically Limited?
<u> </u>	tons/year	Y€	
5. Range of Estimated Fugitive Emissions (as to tons/year	applicable):		
6. Emission Factor: N/A			7. Emissions
Potential emissions calculated using GE v	endor emission	data.	Method Code:
Reference:			2
8. Calculation of Emissions:			
Hourly emission rate (Field 3) is combust and 18°F ambient temperature.  Annual emissions (Field 3) based on com lb/hr) for 100 % load and 59°F ambient average annual temperature for Tampa  Annual Emissions = 2.8 lb/hr x 8,760 hr/Annual Emissions = 12.3 ton/yr	bustion turbine temperature (co is 72°F). yr x (1 ton / 2,00	vendor b onservativ	nourly data (2.8

# Attachment C BPS Semiannual CEMS Report Quarters III & IV, 2003



January 30, 2004

Ms. Deborah Getzoff Southwest District Florida Department of Environmental Protection 3804 Coconut Palm Drive Tampa, Florida 33619 Via FedEx Airbill No. 7905 3402 9178

Mr. Jerry Campbell
The Environmental Protection Commission
of Hillsborough County
1410 North 21st Street
Tampa, Florida 33605

Via FedEx Airbill No. 7925 6039 9194

Re: Tampa Electric Company Quarter III & IV, 2003

Bayside Semi-Annual Excess Emissions & Subpart GG Report

Air Construction Permit #0570040-015-AC

Air Permit Number: PSD-FL-301A AIRS #0570040, E.U. ID#020, 021, 022

Dear Ms. Getzoff and Mr. Campbell:

As required by Section III, Specific Condition 25.and Section IV Appendix XS of the above referenced permit, TEC shall submit a semi-annual report to the Department of Environmental Protection and the Environmental Protection Commission of Hillsborough County, by January 30<sup>th</sup> of each year for Quarters 3 and 4, for each gas turbine summarizing the CEMS data and equipment. The report shall include: the monthly sulfur content (Attachment 1), the NO<sub>x</sub> Excess Emissions Report, the 24-hour block average for each day of operation; the number of 1-hour emission averages excluded from each 24-hour average; the emissions due to monitor downtime; the reason for any monitor downtime; unusual maintenance or repair of the CEMS; a summary of any RATA tests performed, an updated general range of ammonia flow rates required to meet NO<sub>x</sub> emissions limitations over the range of gas turbine load conditions (Attachments 2-4) and the Data Assessment Report (DAR) (Attachment 5) as required by Specific Condition 23.e.

Ms. Deborah Getzoff Mr. Jerry Campbell January 30, 2004 Page 2 of 2

If there are any questions regarding this report, please contact Laurie Pence or me at (813) 641-5060.

Sincerely,

Laura R. Crouch

Manager – Air Programs

Environmental, Health & Safety

EA/br/RPT001BPS Exc. Emis./GG Report Qtr 3/4, 03

Enclosures

I, the undersigned, am the responsible official as defined in Chapter 62-213, F.A.C., of the Title V source for which this document is being submitted. I hereby certify, based on the information and belief formed after reasonable inquiry, that the statements made and data contained in this document are true, accurate, and complete.

Use CM	1/25/04
Signature	Date
Wade A. Maye	General Manager, Bayside Power Station
Name	Title

# Attachment 1

#### BAYSIDE POWER STATION

#### MONTHLY SULFUR CONTENT REPORT

Date	Sulfur Content (grains per 100 SCF)
July-03	0.0954
August-03	
September-03	0.0508

#### BAYSIDE POWER STATION MONTHLY SULFUR CONTENT REPORT

Date	Sulfur Content (grains per 100 SCF)
October-03	0.0416
November-03	0.0592
December-03	0.0531

Note: 10/30/03-11/12/03 vendor analyzer out

## Attachment 2

#### SUMMARY REPORT - NO. EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE NSPS SUBPART GG

Pollutant: NOx - Combustion Turbine

Emission Limitation: 3.5 ppmvd @ 15% O<sub>2</sub> on a 24-hour block

average

Reporting period dates: From 07/01/03 to 12/31/03

Company:

Tampa Electric Company

Address:

P.O. Box 111

Tampa, FL 33601-0111

Monitor Manufacturer

and Model No.:

Thermal Environmental 42CLS

Date of Latest CMS Certification or Audit

Process Unit

Description: 169 MW Combined Cycle

Combustion Turbine

(CT 1A)

Total source operating

time in reporting period!:

3331.5

October 2003

Emission Data Summary <sup>t</sup>		CMS Performance Summary <sup>2</sup>		
Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:		
a. Startup/Shutdown	223	a. Monitor equipment malfunctions	0	
b. Control equipment problems	0	b. Non-Monitor equipment malfunctions	0	
c. Process problems	4	c. Quality assurance calibration	36	
d. Other known causes	20	d. Other known causes	10	
e. Unknown causes	0	e. Unknown causes	0	
2. Total duration of excess emission	247	2. Total CMS Downtime	46	
3. Total duration of excess emissions x (100) Total source operating time	7.0 %	3. Total CMS Downtime x (100) Total source operating time	1.0 %	

Note: On a separate page, describe any changes to CMS, process or controls during last 6 months. For each quarter, summarize the ammonia injection rates over various loads and the data excluded due to startups, shutdowns, and malfunctions.

This form is used for reporting excess emission according to New Source Performance Standard (NSPS) Subpart GG only. (CO is not a regulated by Subpart GG and is reported under the semi-annual excess emission report required by Section III, permit condition 25.)

- 1. For gases record all times in hours.
- 2. For the reporting period: if the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 60.7(c) shall be submitted.

TEC Note: The summary report form and the excess emission report required will also be submitted in the semi-annual report.

Per Title V Permit #0570040-015-AC, Section III, Specific Condition 25

BAYSIDE POWER STATION - CT 1A 24 - HOUR BLOCK AVERAGE - QUARTER 3, 2003

	BLOCK AVERAGE	
<u> </u>		24-hour block NOx
07/01/2003	0.7	3.0
07/02/2003	0.3	3.0
07/03/2003	0.3	3.0
07/04/2003	0.4	3.0
07/05/2003	0.3	3.0
07/06/2003	0.3	3.0
07/07/2003	0.4	3.0
07/08/2003	0.6	3.1
07/09/2003	0.6	3.5
07/10/2003	0.8	3.1
07/11/2003	0.5	2.9
07/12/2003	0.7	3.0
07/13/2003	0.6	3.0
07/14/2003	0.7	3.0
07/15/2003	0.7	3.0
07/16/2003	0.7	3.0
07/17/2003	0.8	3.0
07/18/2003	0.7	3.0
07/19/2003	0.8	3.0
07/20/2003	0.8	3.0
07/21/2003	0.9	3.0
07/22/2003	ű. <b>8</b>	3.0
07/23/2003	0.8	3.0
07/24/2003	0.9	3.0
07/25/2003	1.0	3.0
07/26/2003	1.0	3.0
07/27/2003	1.1	3.0
07/28/2003	4.3	3.2
07/29/2003	1.2	3.3
07/30/2003	3.0	1.1
07/31/2003	1.3	3.2
08/01/2003	0.7	3.1
08/02/2003	0.7	3.0
08/03/2003	0.8	3.0
08/04/2003	0.8	3.1
08/05/2003	0.8	3.0
08/06/2003	0.9	3.1
08/07/2003	0.8	2.9
08/08/2003	0.7	2.9
08/09/2003	0.8	3.0
08/10/2003	0.8	3.0
08/11/2003	0.9	3.1
08/12/2003	1.0	3.0
08/13/2003	1.1	2.7
08/14/2003	0.9	3.1
08/15/2003	1.1	3.0
	1.2	2.9
08/16/2003		2.9
08/17/2003	1.3	
08/18/2003	0.7	2.5

_		
08/19/2003	0.4	2.9
08/20/2003	0.4	2.9
08/21/2003	0.4	2.9
08/22/2003	0.4	2.9
08/23/2003	0.5	2.9
08/24/2003	0.6	3.0
08/25/2003	0.6	2.9
08/26/2003	0.8	3.0
08/27/2003	0.7	2.9
08/28/2003	0.7	2.9
08/29/2003	0.8	2.7
08/30/2003	0.7	2.9
08/31/2003	0.8	2,9
09/01/2003	1.4	3.4
09/02/2003	0.8	2.9
09/03/2003	0.9	3.0
09/04/2003	1,0	2.9
09/05/2003	0.9	2.9
09/06/2003	0.9	2.9
09/07/2003	1.1	2.9
09/08/2003	1.2	2.8
09/09/2003	1.1	2.9
09/10/2003	0.9	2.9
09/11/2003	1.0	2.9
09/12/2003	1.0	2.9
09/13/2003	1.1	2.4
09/14/2003	1.1	2.9
09/15/2003	1.1	2.9
09/16/2003	0.6	2.9
09/17/2003	0.4	2.9
09/18/2003	0.5	2.9
09/19/2003	0.6	2.9
09/20/2003	0.5	2.9
09/21/2003	0.5	2.9
09/22/2003	0.6	2.9
09/23/2003	0.7	3.0
09/24/2003	0.7	2.9
09/25/2003	0.7	2.9
09/26/2003	0.7	2.9
09/27/2003	0.7	2.9
09/28/2003	0.7	2.9
09/29/2003	0.7	2.9
09/30/2003	8.0	2,9

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

#### BAYSIDE POWER STATION - CT 1A EXCLUDED DATA - QUARTER 3, 2003

Date	Hours Data . Excluded	NOx Value of Excluded Data	CO Value of Excluded Data	Reason for Exclusion
07/01/2003		5.9	20.6	Shutdown
07/02/2003		47.8	197.6	Start-up
07/08/2003		10.2	86.4	Shutdown
07/09/2003		27.6	155.8	Start-up
07/11/2003		28.0	1241.0	Invalid Hour
	0900	39.7	975.3	Start-up
	1000	52.1	877.1	Start-up
	1100	122.2	157.9	Malfunction
	1700	9.6	278.6	Shutdown
07/12/2003	0100	39.7	205.0	Shutdown
07/14/2003	0300	44.9	649.4	Shutdown
	0600	46.1	368.4	Start-up
	0700	18.0	41.9	Start-up_
07/15/2003	2300	40.3	604.0	Shutdown
07/16/2003	0700	28.3	118.0	Start-up
07/17/2003	1900	24.0	327.6	Shutdown
07/18/2003	1200	46.6	300.9	Start-up
	1300	14.7	3.9	Start-up
	1900	31.9	179.5	Shutdown
07/19/2003	1000	21.1	359.1	Start-up
	1100	35.9	266.6	Start-up
	2200	6.2	38.2	Shutdown
	2300	2.7	2756.9	Shutdown
07/20/2003	1300	38.6	430.8	Start-up
	1400	15.4	12.7	Start-up
07/22/2003	2200	6.2	35.3	Shutdown
	2300	4.4	2480.5	Shutdown
07/23/2003	0800	7.1	525.5	Start-up
	0900	24.3	150.2	Start-up
07/24/2003		8.2	175.4	Shutdown
07/25/2003		38.4	362.9	Start-up
	0800	20.0	55.1	Start-up
07/26/2003		11.0	232.1	Shutdown
07/27/2003		35.0	380.1	Start-up
	1000	10.2	24.8	Start-up
07/29/2003		25.1	111.8	Start-up
07/30/2003		41.9	741.2	Shutdown
07/31/2003		25.6	185.7	Start-up
	2300	11.9	226.7	Shutdown
08/01/2003		24.4	429.1	Start-up
	1000	22.3	95.4	Start-up
08/04/2003	<del></del>	11.2	358.1	Shutdown
08/05/2003		24.1	143.8	Start-up
	2400	6.7	72.1	Shutdown
08/06/2003		15.2	94.7	Start-up
	2300	8.5	106.7	Shutdown
08/07/2003		35.1	242.2	Start-up
08/10/2003		15.8	605.5	Shutdown
08/11/2003		34.5	132,3	Start-up
	2300	20.2	322 2	Shutdown
08/12/2003		48.5	336.4	Start-up
	2400	25	353	Shutdown
08/13/2003		67.6	189.6	Start-up
	0800	5.2		Start-up
	2300	11.3	452.8	Shutdown
08/14/2003	<del></del>	20.3	153.9	Start-up
	2300	6.7	51.7	Shutdown
	2400	8.4	2531.7	Shutdown
08/15/2003		22.7	161.2	Start-up
08/19/2003		12	162.6	Shutdown
08/20/2003	0800	38.8	438.5	Start-up

	0900	9.3	5.8	Start-up
<del> </del>	2400	16.8	215.1	IShutdown
08/21/2003		25.3	175.5	Start-up
08/22/2003		5.5	20.7	Shutdown
00,22,200	2000	20.7	1431.6	Shutdown
08/23/2003		•	88	Start-up
00/25/2003	1100	28.8	138.2	Start-up
	2300	15.6	400.2	Shutdown
08/24/2003		33.7	259.7	Start-up
08/27/2003		27.3	1157.9	Shutdown
00/2/12003	0900	20.1	157.9	Start-up
08/28/2003		[35.5	721.1	IShutdown
08/29/2003		40.5	334.3	Start-up
00/29/2003	0800	16.1	1	Start-up
L	2300	10.6	405.3	Shutdown
08/30/2003		33.2	215.2	Start-up
08/31/2003		18.9	447.5	Shutdown
		17.8	528.6	Start-up
09/01/2003		22.2	108.1	Start-up
00/00/0003	0900			<del> </del>
09/02/2003		5.5	12.9	Shutdown
	0300	36.9	1403.3	Shutdown
<del></del>	0700	29.1	100.2	Start-up
00/00/000	2300	9.4	109.2	Shutdown
09/03/2003		22.2	500.8	Start-up
	0700	13.2	42.9	Start-up
	2300	16.9	755.2	Shutdown
09/04/2003		35.5	184	Start-up
	2100	6.1	32.3	Shutdown
	2200	2.7	2415.8	Shutdown
09/05/2003		25.2	134.4	Start-up
09/08/2003	<del></del>	6.1	54,7	Shutdown
	0600	14.7	69.3	Start-up
09/12/2003	1300	9	58.8	Malfunction
	1400	117.1	62.9	Malfunction
	2300	15.7	434.8	Shutdown
09/13/2003		22.6	135.7	Start-up
09/14/2003	0000	7	269.6	Shutdown
	0800	8.9	516.3	Start-up
	0900	18.6	100.9	Start-up
09/17/2003	2300	6.3	46.9	Shutdown
09/18/2003	0000	1.	2304.2	Shutdown
	0600	41.1	243.3	Start-up
09/19/2003	0100	9.1	131.6	Shutdown
	0700	17.9	335.3	Start-up
	0800	16.7	58.2	Start-up
	2000	7.1	66.1	Shutdown
07/20/2003		15.2	1446.1	Start-up
	0800	27.2	153.7	Start-up
09/21/2003		15.4	324.9	Shutdown
	0800	22	112.8	Start-up
09/22/2003		7.9	150.8	Shutdown
	0700	33.7	424.1	Start-up
		14.5	54.7	Start-up
09/24/2003		113.6	265.8	Shutdown
09/25/2003		34.5	338.2	Start-up
	0700	12.4	33.5	Start-up
09/27/2003		40.3	703.4	Shutdown
	0800	35.4	363.2	Start-up
	0900	16.5	49.7	Start-up
C9/28/2003		18	345.8	Shutdown
	0800	33.7		Start-up
	0900	15.3	42.5	Start-up
09/30/2003		10.3	135.9	Shutdown
	0700	23.6		Start-up
	0800	16	49.8	Start-up

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

#### BAYSIDE POWER STATION - CT 1A MONITOR DOWNTIME - QUARTER 3, 2003

Date	Hours of Missing Data for Monitor Downtime	Reason for Monitor Downtime 🛷 🕬
07/01/2003	1	Calibrate CO Monitor
08/18/2003	3	Aborted Linearity
09/10/2003	2	CO Monitor failed Calibration/ Re-calibration

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The contract of the property of the state of the contract of t	·I 00.670/ I
Monitor availability:	1 99.07%
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Internitor availability.	

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

# BAYSIDE POWER STATION - CT 1A MAINTENANCE/REPAIR OF CEMS - QUARTER 3, 2003

Date	Unusual Maint. Or Repair of CEMS 😂 🔞
	No Unusual Maintenance of CEMS
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<b></b>	
<b></b>	<u> </u>
<u> </u>	 

RATA data required pursuant to these CFRs

NOx: 40 CFR 75, Appendix B CO: 40 CFR 60, Appendix F

#### MONITORING DATA CHECKING SOFTWARE 4.1 BETA

05/28/2003

TEST SUMMARY REPORT

PAGE 1

ORIS Code: 7873 State: FL

Facility Name: BAYSIDE County: HILLSBOROUGH

Unit Stack

Reported Recalculated Sys Comp Test Hour/ Test Load Test Test

End Date Time # Lvls Reason Result Result ID Comp/Sys Parm Type Type

CT1A /113 NOX 04/23/2003 1519 1 1 C RATA (RT 610-616)

MONITORING DATA CHECKING SOFTWARE 4.1 BETA

Pass-APS Pass-APS 05/28/2003

PAGE 2

RATA REPORT (RT 610/611)

: Facility: BAYSIDE FL State: ORIS\*Code: 7873 Unit/Stack ID: System ID: 113 Parameter: NOX CT1A

Test End Date/Time: 04/23/2003 1519 Test No.: 1 # of Operating Levels: 1 Units of Measure: LB/MMSTU

Reason for Test: C

Next RATA: Four Op Qtrs Performance Spec: <= 10.0% Recalc. Results: Pass-APS % RA:12.77 Mean Diff: 0.001 BAF: 1.111

Reported Results: Pass-APS % RA:12.77 Mean Diff: 0.001 BAF: 1.111

Operating Level: H

	Start		End Run	Re	ference	Monitoring	Gross L	.oad	
Run	Start Date	Time	End Date	Time :	Status	Method	Value	or Velocity	
===	========	=====	=======	=====	======	========	=======	= <b>==</b> ======	:=====================================
1	04/23/2003	1023	04/23/2003	1044	1	0.012	0.011	162	
2	04/23/2003	1054	04/23/2003	1115	1	0.012	0.011	162	
3	04/23/2003	1128	04/23/2003	1149	1	0.012	0.011	<b>1</b> 61	
4	04/23/2003	1212	04/23/2003	1233	1	0.012	0.011	160	
5	04/23/2003	1247	04/23/2003	1308	1	0.013	0.011	160	
6	04/23/2003	1323	04/23/2003	1344	1	0.012	0.011	159	
7	04/23/2003	1355	04/23/2003	1416	1	0.012	0.011	153	
8	04/23/2003	1427	04/23/2003	1448	1	0.012	0.011	<b>1</b> 58	
9	04/23/2003	1458	04/23/2003	1519	1	0.013	0.011	157	

Reported Recalculated Summary Statistics

Mean of Monitoring System 0.011 0.011 Mean of Reference Method Values 0.012 0.012

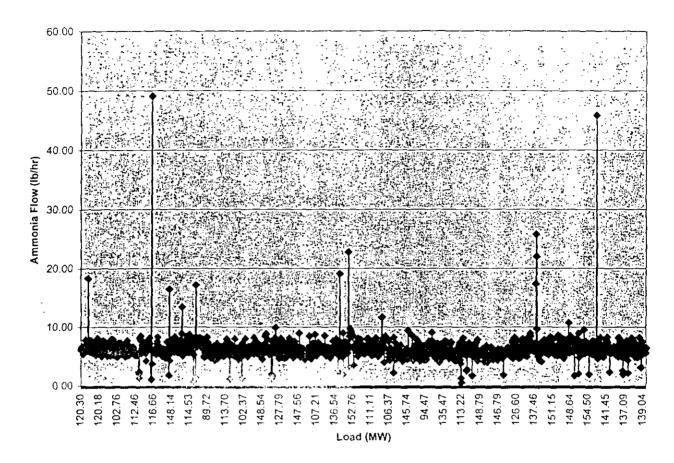
Mean of Difference 0.001 0.001

Standard Deviation of Difference 0.000 0.000 Confidence Coefficient 0.000 0.000

T-Value 2.306 2,306 Relative Accuracy: 12.77 12.77 Bias Adjustment Factor 1.111 1.111 APS Flag 1

Indicator of Normal Op, Level Ν 160 Gross Unit Load or Velocity 160

Reference Method Used 7e,3a



Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 24

# SUMMARY REPORT – $NO_x$ EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE NSPS SUBPART GG

Pollutant: NOx - Combustion Turbine

Emission Limitation: 3.5 ppmvd @ 15% O2 on a 24-hour block

average

Reporting period dates: From 07/01/03 to 12/31/03

Tampa Electric Company Company: Monitor Manufacturer P.O. Box 111 Address: Thermal Environmental 42CLS and Model No.: Tampa, FL 33601-0111 Date of Latest CMS October 2003 Certification or Audit Process Unit Description: 169 MW Combined Cycle Total source operating Combustion Turbine 3201.75 time in reporting period': (CT 1B)

Emission Data Summary	CMS Performance Summary <sup>2</sup>
Duration of excess emissions in reporting periodue to:	od 1. CMS downtime in reporting period due to:
a. Startup/Shutdown210	a. Monitor equipment malfunctions 0
b. Control equipment problems 0	b. Non-Monitor equipment malfunctions 9
c. Process problems 0	c. Quality assurance calibration0
d. Other known causes 0	d. Other known causes0
e. Unknown causes 0	e. Unknown causes0
2. Total duration of excess emission210	
3. Total duration of excess emissions x (100)  Total source operating time 7 %	3. Total CMS Downtime x (100)  Total source operating time0 %

Note: On a separate page, describe any changes to CMS, process or controls during last 6 months. For each quarter, summarize the ammonia injection rates over various loads and the data excluded due to startups, shutelowers, and malfunctions

This form is used for reporting excess emission according to New Source Performance Standard (NSPS) Subpart GG only. (CO is not a regulated by Subpart GG and is reported under the semi-annual excess emission report required by Section III, permit condition 25.)

- 1. For gases record all times in hours.
- 2. For the reporting period: if the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 60.7(c) shall be submitted.

TEC Note. The summary report form and the excess emission report required will also be submitted in the semi-annual report.

BAYSIDE POWER STATION - CT 1B 24 - HOUR BLOCK AVERAGE - QUARTER 3, 2003

	BLOCK AVERAGE	
		24-hour block NOx
07/01/2003		3.2
07/02/2003		3.0
07/03/2003	1.3	3.1
07/04/2003		3.0
07/05/2003	1.1	3.0
07/06/2003	1.1	3.0
07/07/2003	1.0	3.2
07/08/2003		3.0
07/09/2003	1,2	3.1
07/10/2003	0.9	3.0
07/11/2003	0.9	3.0
07/12/2003	1.0	3.0
07/13/2003	0.9	3.0
07/14/2003		2.9
07/15/2003	0.9	3.0
07/16/2003	<del></del>	3.1
07/17/2003	1.2	3.3
07/18/2003		3.1
07/19/2003	Offline	Offline
07/20/2003	0.0	0.0
07/21/2003	1.0	3.0
07/22/2003	1.0	3.0
07/23/2003	1.0	3.0
07/24/2003	1.0	3.0
07/25/2003	1.0	3.0
07/26/2003		3.0
07/27/2003	1.0	3.0
07/28/2003	1.0	3.0
07/29/2003		3.5
07/30/2003		2.9
07/31/2003		3.0
08/01/2003	<del></del>	3.0
08/02/2003	<del></del>	3.0
08/03/2003		Offline
08/04/2003	<del></del>	3.3
08/05/2003	<u> </u>	3.0
08/06/2003		3.0
08/07/2003	<del></del>	3.0
03/03/2003		2.9
08/09/2003		2.9
08/10/2003		3.0
08/11/2003		3.0
08/12/2003		3.0
08/13/2003	1.2	3.0
08/14/2003		3,0
08/15/2003		3.0
08/16/2003	<del></del>	2.9
08/17/2003		3.2
08/18/2003		2.9
	•	

08/19/2003	1.3	2.9
08/20/2003	1.3	3.1
08/21/2003	1.3	2.9
08/22/2003	Offline	Offline
08/23/2003	0.7	3.0
08/24/2003	0.6	3.0
08/25/2003	0.7	2.9
08/26/2003	0.9	2.7
08/27/2003	0.7	3.0
08/28/2003	0.7	3.0
08/29/2003	8.0	3.0
08/30/2003	0.7	2.9
08/31/2003	0.7	2.9
09/01/2003	0.7	2.9
09/02/2003	0.7	2.9
09/03/2003	0.8	2.9
09/04/2003	0.8	3.1
09/05/2003	Offline	Offline
09/06/2003	0.7	2.9
09/07/2003	8.0	3.3
09/08/2003	0,8.	2.9
09/09/2003	0.9	2.9
09/10/2003	0.8	2.9
09/11/2003	0.9	3.0
09/12/2003	1.1	2.9
09/13/2003	1.0	2.9
09/14/2003	0.9	3.1
09/15/2003	1.0	2.9
09/16/2003	0.9	3.0
09/17/2003	1.0	2.9
09/18/2003	1.0	2.9
09/19/2003	1.0	2.9
09/20/2003	1.0	2.9
09/21/2003	1.0	3.0
09/22/2003	1.0	2.9
09/23/2003	1.0	3.0
09/24/2003	1.1	2.9
09/25/2003	1.1	2.9
09/26/2003	1.1	2.9
09/27/2003	1.7	3.0
09/28/2003	1.3	3.3
09/29/2003	1.1	2.9
09/30/2003	1.1	2.9

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

# BAYSIDE POWER STATION - CT 1B EXCLUDED DATA - QUARTER 3, 2003

	Hours Data	NOv Value of	CO Value of	
	Excluded	Excluded Data	CO Value of Excluded Data	Reason for Exclusion
Date	<u></u>	Excluded Data	39.1	_ <del>}</del>
07/01/2003		<del>- </del>	2358.8	Shutdown
07/00/0000	2400	<u> </u>	<u> </u>	Shutdown
07/02/2003		24.4	237.9	Start-up
07/03/2003	<del></del>	24.8	1211.7	Shutdown
07/04/2003		31	166	Start-up
07/06/2003		7.2	68.8	Shutdown
07/07/2003		38.8	391.6	Start-up
	2200	16.8	216.5	Shutdown
07/08/2003		21.5	234	Start-up
07/10/2003		36.9	1211.5	Shutdown
	0700	24.3	175.7	Start-up
07/13/2003	0100	9.8	115.1	Shutdown
	1000	25.6	151.9	Start-up
07/14/2003	0200	Ţ•	263.8	Shutdown
	0600	12.2	74.4	Start-up
07/16/2003	2200	*	44.7	Shutdown
	2300	10.1	2337.6	Shutdown
07/17/2003	0800	20	636.8	Start-up/Shutdown
	1100	33.4	410.2	Start-up
<del></del>	2200	6.7	83	Shutdown
07/18/2003	1200	31.3	332.2	Start-up
	1300	27.6	100.4	Start-up
<del></del>	1800	6.6	155.1	Shutdown
07/20/2003	<del></del>	29.1	520.7	Start-up/ Shutdown
07/21/2003		51.5	261	Start-up
<del></del>	0900	44.5	632.1	Start-up
	1000	18.2	109.1	Start-up
08/02/2003	<del></del>	17.1	503.5	Shutdown
08/04/2003	<del></del>	43.5	379.2	Start-up
08/16/2003	<del></del>	6.9	170.1	Shutdown
08/17/2003		39.5	470.9	Start-up
0071720	1000	110	·	Start-up
<u> </u>	2300	·   * · · · · · · · · · · · · · · · · ·	70	Shutdown
08/18/2003		36	297.4	Start-up
00/10/2000	2200	21.9	414.3	Shutdown
08/19/2003		45.5	341.2	Start-up
08/20/2003		*	34.8	Shutdown
00/20/2003	2400	<del> </del>	2236.8	Shutdown
08/21/2003		37.1	544.4	Start-up
0012 112003	<del></del>	12.4	36.4	Start-up
<b> </b>	1000 1700	7.3	91.9	Shutdown
08/23/2003		42.6	372.4	Start-up
08/23/2003	<u> </u>		115.7	_ <del></del>
	1200	28	<del></del>	Start-up
0.00	2400	14.6	403.9	Shutdown
03/24/2003		19.8	467.2	Start-up
	1000	19	74.3	Start-up
	2300	19.4	723.5	Shutdown
08/25/2003	0600	40.6	452.8	Start-up

	0700	13.8	29.5	Start-up
	2200	9.4	164.8	Shutdown
08/26/2003	\	22.8	150.7	Start-up
	2400	10.7	151.6	Shutdown
08/27/2003	<del></del>	12.8	490	Start-up
	1000	20.1	126.6	Start-up
09/04/2003	2100	*	224.2	Shutdown
09/06/2003		32.5	464	Start-up
<del></del>	1000	24.2	163.4	Start-up
09/07/2003	0200	*	71.2	Shutdown
	0900	18.6	140	Start-up
	2400	14.5	413.7	Shutdown
09/08/2003	0700	14.2	119.7	Start-up
09/09/2003		6.5	73.4	Shutdown
J	0700	15.6	239.4	Start-up
09/10/2003		10.5	330.6	Shutdown
09/11/2003		26.5	140.2	Start-up
09/12/2003	<del></del>	41.9	1099.6	Shutdown
<b> </b>	0700	46.1	301.6	Start-up
,	0800	50.4	312.1	Start-up
,	0900	*	10.4	Start-up
09/13/2003	2300	*	67.9	Shutdown
09/14/2003	0700	*	617.8	Start-up
	0800	18.5	96.6	Start-up
	2400	24.7	427.1	Shutdown
09/15/2003	0400	8.6	454.8	Start-up
	0500	60	86.7	Start-up
	2400	14.4	657	Shutdown
09/16/2003	0600	25.6	173.3	Start-up
	2400	34.6	949.1	Shutdown
09/17/2003		34	462.3	Start-up
	0700	13.7	57.1	Start-up
09/18/2003	·	6.8	68.1	Shutdown
09/19/2003	l — — — — — — — — — — — — — — — — — —	11,1	467.7	Start-up
	0700	14.2	62.1	Start-up
09/20/2003		20	349.5	Shutdown
09/21/2003	<del></del>	*	341.5	Start-up
<u> </u>	0900	20.5	101.6	Start-up
	2300	*	48	Shutdown
<u> </u>	2400	*	2310.3	Shutdown
09/22/2003	<del></del>	19.8	191.5	Start-up
	2400	36.4	606	Shutdown
09/23/2003		40.4	335.1	Start-up
	2300	25	426.3	Shutdown
09/24/2003		36.3	246.6	Start-up
09/25/2003		24.3	419.3	Shutdown
09/26/2003		33.4	551.2	Start-up
	0700	20.6	48.5	Start-up
	2300	40	612.6	Shutdown
09/27/2003		35.8	235.3	Start-up
	2400	35.1	1392.3	Shutdown
09/28/2003	0700	41.5	343.4	Start-up

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	2300	18.5	445.3	Shutdown
09/29/2003	0600	24.9	192.8	Start-up
	2300	19.3	581.8	Shutdown
09/30/2003	0600	21.3	534.5	Start-up
	0700	14.3	64.1	Start-up
	2200	8.5	114.6	Shutdown

<sup>\*</sup> Data not excluded.

# BAYSIDE POWER STATION - CT 1B MAINTENANCE/REPAIR OF CEMS - QUARTER 3, 2003

Date	Unusual Maint. Or Repair of CEMS	3	n x .
	No Unusual Maintenance of CEMS		
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## BAYSIDE POWER STATION - CT 1B MONITOR DOWNTIME - QUARTER 3, 2003

Hours of Missing Data for Monitor Downtime	Reason for Monitor Downtime
9	Calibration bottles valved out
	<u> </u>
	<u> </u>
	Hours of Missing Data for Monitor Downtime 9

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Monitor availability:	)
INVOLUTION AVAILED MALE	

RATA data required pursuant to these CFRs

NOx: 40 CFR 75, Appendix B CO: 40 CFR 60, Appendix F Date RATA data

MONITORING DATA C

#### MONITORING DATA CHECKING SOFTWARE 4.1 BETA

05/28/2003

TEST SUMMARY REPORT

PAGE 1

ORIS Code: 7873 State: FL

Facility Name: BAYSIDE County: HILLSBOROUGH

Unit/ Reported Recalculated
Stack Sys Comp Test Hour/ Test Load Test Test

CT1B /213 NOX RATA (RT 610-616) 04/17/2003 1209 1 1 C Pass-APS Pass-APS MONITORING DATA CHECKING SOFTWARE 4.1 BETA 05/28/2003

RATA REPORT (RT 610/611) PAGE 2

ORIS Code: 7873 Facility: BAYSIDE State: FL
Unit/Stack ID: CT1B System ID: 213 Parameter: NOX

Test End Date/Time: 04/17/2003 1209 Test No.: 1 # of Operating Levels: 1 Units of Measure: LB/MMBTU

Reason for Test: C

Performance Spec:<= 10.0%</th>Next RATA: Four Op QtrsRecalc, Results:Pass-APS% RA: 9.09 Mean Diff:0.001 BAF: 1.100Reported Results:Pass-APS% PA: 9.09 Mean Diff:0.001 BAF: 1.100

Operating Level: H
Start End Run Reference Monitoring Gross Load
Run Start Date Time End Date Time Status Method Value or Velocity

1 04/17/2003 0702 04/17/2003 0723 1 0.011 0.010 164

2 04/17/2003 0736 04/17/2003 0757 1 0.011 0.010 163 3 04/17/2003 0809 04/17/2003 0830 1 0.011 0.010 162 4 04/17/2003 0850 04/17/2003 0911 1 0.011 0.010 160 5 04/17/2003 0923 04/17/2003 0944 1 0.011 0.010 160 6 04/17/2003 1000 04/17/2003 1021 1 0.011 0.010 159 7 04/17/2003 1035 04/17/2003 1056 1 0.011 0.010 158 8 04/17/2003 1116 04/17/2003 1137 1 0.011 0.010 157 9 04/17/2003 1148 04/17/2003 1209 1 0.011 0.010 157

Summary Statistics Reported Recalculated

Mean of Monitoring System 0.010 0.010

Mean of Reference Method Values 0.011 0.011

Mean of Difference 0.001 0.001

Standard Deviation of Difference 0.000 0.000
Confidence Coefficient 0.000 0.000

 Confidence Coefficient
 0.000
 0.000

 T-Value
 2.306
 2.306

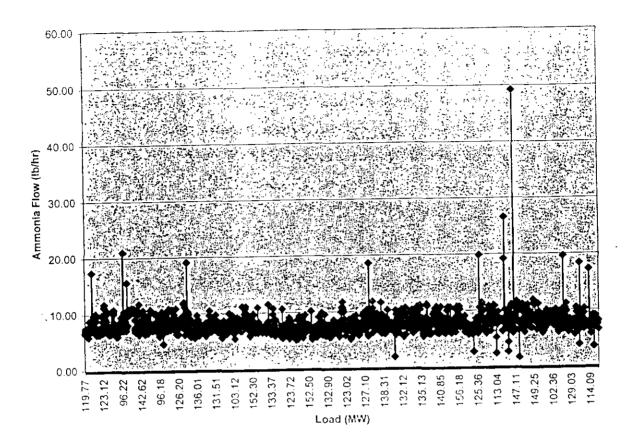
 Relative Accuracy:
 9.09
 9.09

 Bias Adjustment Factor
 1.100
 1.100

 APS Flag
 1
 1

Indicator of Normal Op. Level N N Gross Unit Load or Velocity 160 160

Reference Method Used 7e,3a



Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 24

## SUMMARY REPORT - NO<sub>x</sub> EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE NSPS SUBPART GG

Pollutant: NOx - Combustion Turbine

Emission Limitation: 3.5 ppmvd @ 15% O2 on a 24-hour block

average

Reporting period dates: From 07/01/03 to 07/31/03

Company:

Tampa Electric Company

Address:

P.O. Box 111

Tampa, FL 33601-0111

Monitor Manufacturer

and Model No.:

Thermal Environmental 42CLS

Date of Latest CMS

Certification or Audit

October 2003

Process Unit

Description: 169 MW Combined Cycle

Combustion Turbine

(CT 1C)

Total source operating

time in reporting period1:

3428.25

Emission Data Summary <sup>1</sup>	CMS Performance Summary <sup>2</sup>
Duration of excess emissions in reporting periodue to:	1. CMS downtime in reporting period due to:
a. Startup/Shutdown 230	a. Monitor equipment malfunctions0
b. Control equipment problems 0	b. Non-Monitor equipment malfunctions 0
c. Process problems 5	c. Quality assurance calibration0
d. Other known causes 0	d. Other known causes0
e. Unknown causes 0	e. Unknown causes0
2. Total duration of excess emission 235	2. Total CMS Downtime0
3. Total duration of excess emissions x (100)  Total source operating time 7 %	3. Total CMS Downtime x (100)  Total source operating time 0%

Note: On a separate page, describe any changes to CMS, process or controls during last 6 months. For each quarter, summarize the ammonia injection rates over various loads and the data excluded due to startups, shutdowns, and malfunctions.

This form is used for reporting excess emission according to New Source Performance Standard (NSPS) Subpart GG only. (CO is not a regulated by Subpart GG and is reported under the semi-annual excess emission report required by Section III, permit condition 25.)

- 1. For gases record all times in hours.
- 2. For the reporting period: if the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 60.7(c) shall be submitted.

TEC Note: The summary report form and the excess emission report required will also be submitted in the semi-annual report.

BAYSIDE POWER STATION - CT 1C 24 - HOUR BLOCK AVERAGE - QUARTER 3, 2003

	BLOCK AVERAGE	24-hour block NOx
Date		
07/01/2003	0.7	3.0
07/02/2003	0.8	3.1
07/03/2003		3.3
07/04/2003		3.1
07/05/2003		3.0
07/06/2003		3.0
07/07/2003		3.0
07/08/2003		3.0
07/09/2003		3.0
07/10/2003	0.7	3.0
07/11/2003		3.0
07/12/2003		3.0
07/13/2003		3.0
07/14/2003	0.7	3.0
07/15/2003	0.9	3.0
07/16/2003		3.0
07/17/2003		3.0
07/18/2003	Offline	Offline
07/19/2003	Offline	Offline
07/20/2003	0.0	0.0
07/21/2003	0.9	3.1
07/22/2003	0.8	3.0
07/23/2003	0.9	3.0
07/24/2003	0.8	3.0
07/25/2003	0.9	3.0
07/26/2003	0.8	3.0
07/27/2003	0.8	3.0
07/28/2003	0.8	3.0
07/29/2003	0.9	3.0
07/30/2003	0.8	3.0
07/31/2003	0.9	3.0
08/01/2003	0.9	3.0
08/02/2003		3.0
08/03/2003	<del></del>	3.0
08/04/2003	<del></del>	3.0
08/05/2003	<del></del>	3.0
08/06/2003		3.0
08/07/2003	<del></del>	3.0
08/08/2003	<del></del>	2.9
08/09/2003	<del> </del>	2.9
08/10/2003		3.0
08/11/2003	<del></del>	3.0
08/12/2003		3.1
08/13/2003	<del></del>	3.0
08/14/2003	<del></del>	3.0
08/14/2003	<del></del>	2.9
1	<del></del>	2.9
08/16/2003	<del></del>	2.9
08/17/2003		2.9
08/18/2003	0.8	

08/19/2003	0.7	3.2
08/20/2003	0.5	2.9
08/21/2003	0.6	2.9
	0.5	2.9
08/22/2003	0.6	2.7
08/23/2003	0.6	3.0
08/24/2003		2.9
08/25/2003	0.6	3.5
08/26/2003	2.1	
08/27/2003	0.6	2.9
08/28/2003	0.6	2.9
08/29/2003	0.7	2.9
08/30/2003	0.6	2.9
08/31/2003	0.6	2.9
09/01/2003	0.6	2.9
09/02/2003	0.7	3.1
09/03/2003	1.2	2.7
09/04/2003	0.8	2.9
09/05/2003	0.7	2.9
09/06/2003	0.6	2.9
09/07/2003	0.7	2.9
09/08/2003	0.7	3.0
09/09/2003	0.8	2.9
09/10/2003	0.8	2.9
09/11/2003	0.8	3.0
09/12/2003	0.8	2.9
09/13/2003	8.0	2.9
09/14/2003	0.8	2.9
09/15/2003	8.0	2.9
09/16/2003	0.8	2.9
09/17/2003	0.8	2.9
09/18/2003	0.9	2.9
09/19/2003	0.8	2.9
09/20/2003	0.8	2.9
09/21/2003	0.8	2.9
09/22/2003	0.8	2.9
09/23/2003	0.9	3.1
09/24/2003	3.0	2.9
09/25/2003	8.0	2.9
09/26/2003	0.8	2.9
09/27/2003	0.8	2.9
09/28/2003	0.9	2.9
09/29/2003	0.8	2.9
09/30/2003	0.9	2.9

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# BAYSIDE POWER STATION - CT 1C EXCLUDED DATA - QUARTER 3, 2003

	Hours Data	NOx Value of	CO Value of	
Date	Excluded	Excluded Data	Excluded Data	Reason for Exclusion
07/01/2003		14.9	139.8	Start-up
07/03/2003		31.2	1066.9	Shutdown
0170072000	0800	35.2	362.3	Start-up
07/04/2003	(	35	1582.7	Shutdown
07/05/2003		25.7	115.8	Start-up
0110312003	2100	6.7	59.5	Shutdown
07/06/2003	1	38.8	390.7	Start-up
07700/2003	1100	18.5	49.5	Start-up
07/07/2003		47.8	672.8	Shutdown
07/08/2003		37.1	255.9	Start-up
07106/2003	2200	16.4	346.1	Shutdown
07/00/2002		32.8	363.1	Start-up
07/09/2003	1700	36.6	195.5	Start-up
07/4/4/0003		36.4	525.6	Shutdown
07/14/2003		17	81.2	Start-up
07/15/2003		7.3	264.2	Shutdown
07/17/2003		29.7	427.4	Start-up
07/20/2003		45.8	511.4	Shutdown
	1200	34	297	Cold Steam Turbine Start-up
	2000	56.8	185.8	Cold Steam Turbine Start-up
	2100	58.1	182.9	Cold Steam Turbine Start-up
	2200	57.1	190.8	Cold Steam Turbine Start-up
	2300	52.8	182.7	Cold Steam Turbine Start-up
	2400	15.3	421.3	Shutdown
07/21/2003			160.5	Start-up
07/22/2003		23.2	108.5	Cold Steam Turbine Start-up
07/23/2003		13	308.2	Cold Steam Turbine Start-up
	1500	32.3	349.5	Cold Steam Turbine Start-up
ļ	1600	35.4	12	Cold Steam Turbine Start-up
	1700	9.9	96	Shutdown
07/25/2003		8.5	448.7	Start-up
07/26/2003		35.8	44.6	Start-up
	1000	20.3	111.8	Shutdown
07/27/2003	<del></del>	9.1	149.8	Start-up
07/28/2003		22.4		Shutdown
07/29/2003		15.7	722.9	
07/30/2003		40.4	299.5	Start-up Shutdown
08/01/2003		8.9	105.8	
08/02/2003		25.6	435.9	Start-up
	0900	15	53.2	Start-up
	2300	16.9	572.1	Shutdown
08/03/2003		22.6	488	Start-up
	1200	22.1	88.3	Start-up
08/07/2003	3 2300	6.7	69.3	Shutdown
08/08/2003	3 0800	34.1	215.3	Start-up
08/09/200		29	501.4	Shutdown
	0900	21.5	104.2	Start-up
	2300	8.7	303.8	Shutdown
08/10/200		28	252.8	Start-up

08/11/2003	0100	6.2	61.1	Shutdown
		· · · · · · · · · · · · · · · · · · ·	151.8	Start-up
	- · - ·			Shutdown
08/12/2003				Start-up
				Start-up
		· · ·	144.7	Shutdown
08/13/2003			379.3	Start-up
			26.1	Start-up
08/14/2003			252.6	Shutdown
08/15/2003			197.8	Start-up
			506.9	Shutdown
08/16/2003			503.9	Start-up
			17.3	Start-up
08/18/2003			342.2	Shutdown
08/19/2003		- · · ·	357.8	Start-up
			430.1	Shutdown
08/20/2003		36.1	503.2	Start-up
	1000	13.2	19.8	Start-up
08/21/2003		14.8	694.4	Shutdown
08/21/2003		25.6	174.3	Start-up
08/23/2003		14.1	140.2	Malfunction
	0600	27.9	250.9	Malfunction
	0700	28	268.3	Malfunction
	0800	28.7	265.9	Malfunction
	0900	29.1	195.4	Malfunction
08/24/2003		7.9	80.1	Shutdown
08/25/2003		24.3	162.5	Start-up
	2300	8	89.4	Shutdown
08/26/2003		*	391.3	Start-up
	1100	11.8	2.7	Start-up
08/27/2003		17.2	317.7	Shutdown
08/28/2003		18	129.1	Start-up
	2200	6.3	65.8	Shutdown
08/29/2003		36.7	181.7	Start-up
	2400	8.9	99.5	Shutdown
08/30/2003		27.2	498.1	Start-up
	1000	18.1	52.4	Start-up
08/31/2003		18.9	255.1	Shutdown
09/01/2003		38.6	427	Start-up
	1000	10.9	16.6	Start-up
	2400	10.5	126.6	Shutdown
09/02/2003		*	141.2	Start-up
	0900	15.5	78.6	Start-up
<u> </u>	2200	12.6	165.2	Shutdown
09/03/2003		23.6	596	Start-up
	0800	39.7	1372.1	Shutdown
`	1100	18.9	91	Start-up
	2200	18.3	300	Shutdown
		20	501	Start-up
09/04/2003		15	56.2	Start-up
09/06/2003	0800	21.9	363.6	Shutdown
	UTUU	ム   . ブ	1000.0	101101001111

09/08/2003	2400	*	56.2	Shutdown
09/09/2003	0100	*	2510.8	Shutdown
	1000	23.1	136.6	Start-up
09/10/2003	2400	9.1	187.3	Shutdown
09/11/2003		*	530.9	Start-up
	0600	*	93.2	Start-up
09/12/2003	2400	15.8	576.5	Shutdown
09/13/2003		32.2	424.5	Start-up
	1000	22.1	96.9	Start-up
09/15/2003		20.3	311.5	Shutdown
	0600	25.3	138.2	Start-up
09/16/2003		36.2	616	Shutdown
	0700	20.3	133.7	Start-up
09/17/2003		25.7	427	Shutdown
00.1112000	0600	26.1	208.5	Start-up
09/19/2003		22.2	378.2	Shutdown
09/20/2003		16.2	631.5	Start-up
	0900	23.7	122.8	Start-up
09/23/2003		13.5	559.8	Shutdown
00,000	0600	30.2	436.2	Start-up
09/24/2003		24.8	420.5	Shutdown
<u> </u>	0700	22.8	124	Start-up
09/26/2003	1	16.1	859.9	Shutdown
30,00.	0800	*	17.2	Start-up
	0900	23.6	104.7	Start-up
09/28/2003		6.4	40.8	Shutdown
09/29/2003		10.4	2533.1	Shutdown
23.25.2300	0700	38.7	409.6	Start-up
	0800	12.4	30.8	Start-up

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#### BAYSIDE POWER STATION - CT 1C MAINTENANCE/REPAIR OF CEMS - QUARTER 3, 2003

Unusual Maint. Or Repair of CEMS
No Unusual Maintenance of CEMS

## BAYSIDE POWER STATION - CT 1C MONITOR DOWNTIME - QUARTER 3, 2003

Date 🤼	Hours of Missing Data for Monitor Downtime	Reason for Monitor Downtime
<del></del>		
<u> </u>		
<u> </u>		
<b> </b> -		
<u> </u>		

[[[] [[] [[] [] [] [[] [] [[] [] [] [] [	311119/2
Monitor availability.	10070 [[
llMonitor availability 高级 2000 1000 1000 1000 1000 1000 1000 100	

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1404 total hours

NOx: 40 CFR 75, Appendix B CO: 40 CFR 60, Appendix F 1 RATA data Date

#### MONITORING DATA CHECKING SOFTWARE 4.1 BETA

05/28/2003

TEST SUMMARY REPORT

PAGE 1

State: FL ORIS Code: 7873

County: HILLSBOROUGH Facility Name: BAYSIDE

Reported Recalculated Unit/ Test Test Hour/ Test Load

Stack Sys Comp Test Hour/ Test Load Test Test

ID Comp/Sys Parm Type Type End Date Time # Lvls Reason Result Result

04/18/2003 1110 1 1 C Pass-APS Pass-APS RATA (RT 610-616) CT1C /313 NOX MONITORING DATA CHECKING SOFTWARE 4.1 BETA 05/28/2003 RATA REPORT (RT 610/611) PAGE 2

ORIS Code: 7873 Unit/Stack ID: CT1C Facility: BAYSIDE State: NOX Parameter: System ID: 313

Units of Measure: LB/MMBTU Test End Date/Time: 04/18/2003 1110 Test No.: 1 # of Operating Levels: 1

Reason for Test: C

Next RATA: Four Op Qtrs Performance Spec: <= 10.0% 0.002 BAF: 1.111 0.002 BAF: 1.111

Operating Level: H End Run Reference Monitoring Gross Load Start

Run Start Date Time End Date Time Status Method Value or Velocity 1 04/18/2003 0601 04/18/2003 0622 1 0.011 0.010 2 04/18/2003 0652 04/18/2003 0713 1 0.012 0.010 3 04/18/2003 0725 04/18/2003 0746 1 0.012 0.010 4 04/18/2003 0757 04/18/2003 0818 1 0.012 0.010 5 04/18/2003 0830 04/18/2003 0851 1 0.012 0.010 6 04/18/2003 0904 04/18/2003 0925 1 0.012 0.010 7 04/18/2003 0941 04/18/2003 1002 1 0.011 0.010 165 163 162 151 8 04/18/2003 1014 04/18/2003 1035 1 0.011 0.010 160 0.011 0.010 9 04/18/2003 1049 04/18/2003 1110 1

Reported Recalculated Summary Statistics 

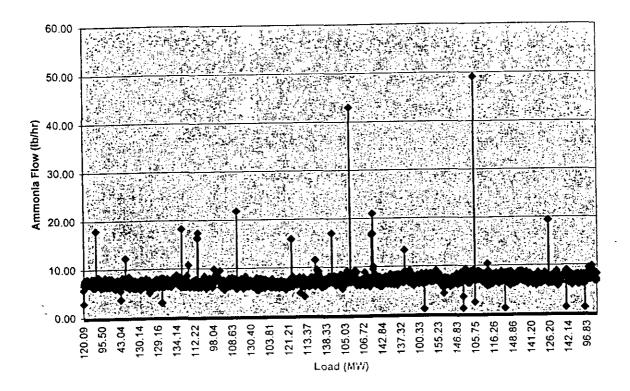
Mean of Monitoring System 0.010 0.010 Mean of Reference Method Values 0.012 0.012 Mean of Difference 0.002 0.002 Standard Deviation of Difference 0.001 0.001 Confidence Coefficient 0.000 0.000

2.306 2.306 T-Value Relative Accuracy: 16.97
Bias Adjustment Factor 1.111

APS Flag 1
Indicator of Normal Op. Level N 16.97 1.111 Indicator of Normal Op. Level N Gross Unit Load or Velocity 164
Reference Method Used 75.3 164

Reference Method Used

7e,3a



Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 24

# Attachment 3

BAYSIDE POWER STATION - CT 1A 24 - HOUR BLOCK AVERAGE - QUARTER 4, 2003

	BLOCK AVERAGE	
		24-hour-block/NOx
10/01/2003	0.5	2.9
10/02/2003	0.3	2.9
10/03/2003	0.2	3.0
10/04/2003	Offline	Offline
10/05/2003	Offline	Offline
10/06/2003	Offline	Offline
10/07/2003	1.5	2.9
10/08/2003	1.3	2.9
10/09/2003	0.4	3.1
10/10/2003	0.2	2.9
10/11/2003	0.2	2.9
10/12/2003	0.3	2.9
10/13/2003	0.3	2.9
10/14/2003	0.3	2.9
10/15/2003	1.3	2.9
10/16/2003		2.9
10/17/2003		2.9
10/18/2003	<del>{</del>	2.9
10/19/2003	<del></del>	2.9
10/20/2003		2.9
10/21/2003	<del></del>	2.8
10/22/2003		2.9
10/23/2003	<del></del>	2.9
10/24/2003	<del></del>	2.9
10/25/2003	<del></del>	2.9
10/26/2003	<del></del>	2.9
10/27/2003	<del></del>	2.9
10/28/2003		2.9
10/29/2003	<del></del>	2.9
10/30/2003		2.9
10/31/2003	<del></del>	2.9
11/01/2003	<del> </del>	2.9
11/02/2003	<del></del>	3.0
11/03/2003	<del></del>	Offline
11/04/2003	<del></del>	0.0
11/05/2003	+	0.0
11/06/2003		2.9
11/07/2003	<del></del>	2.9
11/03/2003		2.9
11/09/2003	<del></del>	2.9
11/10/2003	<del></del>	2.9
11/11/2003	<del></del>	2.9
11/12/2003		3.0
11/13/2003		1.9
11/14/2003	<del></del>	2.5
11/15/2003	<del></del>	2.9
11/16/2003		2.9
11/16/2003		3.2
		2.9
11/18/2003		1

	, <u></u>	<del>,</del>
11/19/2003		2.8
11/20/2003		3.2
11/21/2003		2.9
11/22/2003	1.1	3.1
11/23/2003	0.5	2.9
11/24/2003	0.7	3.4
11/25/2003	0.6	3.0
11/26/2003	0.7	3.0
11/27/2003	0.6	2.9
11/28/2003	0.5	2.9
11/29/2003	0.7	2.9
11/30/2003	0.6	2.9
12/01/2003	0.7	2.9
12/02/2003	0.7	2.9
12/03/2003	0.7	3.0
12/04/2003	0.6	2.9
12/05/2003	0.7	3.0
12/06/2003	0.8	2.9
12/07/2003	0.9	2.9
12/08/2003	0.9	2.9
12/09/2003	0.9	2.9
12/10/2003	0.8	2.9
12/11/2003	0.8	2.9
12/12/2003	0.9	2.9
12/13/2003	0.9	2.9
12/14/2003	0.8	2.9
12/15/2003	Offline	Offline
12/16/2003	Offline	Offline
12/17/2003	Offline	Offline
12/18/2003	Offline	Offline
12/19/2003	Offline	Offline
12/20/2003	Offline	Offline
12/21/2003	0.0	0.0
12/22/2003	Offline	Offline
12/23/2003	1.1	2.9
12/24/2003		2.9
12/25/2003	1.1	2.9
12/26/2003	1.2	2.9
12/27/2003	1.3	2.9
12/22/2003	0.0	0.0
12/29/2003		3.0
12/30/2003		3.1
12/31/2003	1.3	2.9

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## BAYSIDE POWER STATION - CT 1A EXCLUDED DATA - QUARTER 4, 2003

			- QUARTER 4, 2003	
Date	Hours Data	NOx Value of - Excluded Data	CO Value of Excluded Data	Reason for Exclusion
10/02/2003	0000	17.3	348.2	Shutdown
	0700	16.9	230.6	Start-up
	0800	16.9	26.1	Start-up
	2200	9.4	104.6	Shutdown
0/03/2003	1000	42.1	111.2	Start-up
	2100	38.8	942.0	Shutdown
0/07/2003		45.8	•	Start-up
	0700	54.3	,	(Stan-up
	0900	15.5	19.4	Start-up
	2400	27.3	364.5	Shutdown
0/08/2003		17.2	473.2	Start-up
	0700	18.5	92.4	Start-up
	2200	9.7	177.2	Shutdown
0/09/2003		•	35.1	Start-up
0,03,2003	0700	22.3	113.5	Start-up
0/43/2003		29.6	433.4	Shutdown
0/13/2003		25.0	153.9	Start-up
014.412002	0600		<del></del>	<del></del>
0/14/2003		29.6	433.4	Shutdown
04510000	0600	25.0	153.9	Start-up
0/15/2003		46.2	243.1	Malfunction
0/16/2003		9.2	99.2	Shutdown
0/17/2003		48.4	153.4	Start-up
	2300	5.9	20.1	Shutdown
10/18/2003		15.2	428.4	Start-up
<u> </u>	0800	24.1	80.4	Start-up
0/19/2003	0000	9.6	103.6	Shutdown
	0600	33.9	156.7	Start-up
0/20/2003		11.0	132.8	Shutdown
19/21/2003	0400	5.7	1474 3	Start-up
	0500	30.4	179.2	(Start-up
10/28/2003	1000	35.4	1261.6	Start-up
10/29/2003	2300	8 7	146.6	Shutsown
10/30/2003	1100	28.4	145.5	Start-up
	2100	15.0	505.2	Shutdown
0/31/2003		44.8	316.2	Start-up
	1400	26.3	61.7	Start-up
	1500	7.1	·-	tuning
	1600	7.0	•	tuning
	1700	5.2	·	tuning
	2004)	7.0	269.3	Shutdown
1/01/2003		(11.6	1577.9	Start-up
170 172003	0900	36.5	216.4	Start-up
1/02/2002		7.2	179.2	Shutdown
1/02/2003			<del></del>	Start-up
	0900	43.5	319.9	Start-up
1.01/2025	1000	19.9	1,311	
1/04/2003		32.6	401.1	Start-up/ Shutdown
1/05/2003		41.6	260.4	tuning
	1500	48.9	189.1	ltuning
	1600	50.3	185.2	tuning
	1700	50.1	213.7	tuning
	1800	49.9	215.6	tuning
	1900	49.8	218.8	tuning
	2000	149.3	219 4	turing
	2100	49	220.3	ប្រភពិទ្ធ
	2200	49.6	218.2	tuning
1/06/2003	0100	50.3	215.7	tuning
	0200	49.9	218.9	tuning
		51.5	212.7	tuning
	0300			
	0300			· · · · · · · · · · · · · · · · · · ·
	0300 0400 0500	51.2	217.6	tuning tuning

	Londo	22.1	lane e	tuning
<del> </del> -	0800	22.4	296.6	tuning Stadum
<u> </u>	1500	22.4	136.1	Start-up
	2200	13.2	196.9	Shutdown
11/07/2003		13.5	586.5	Start-up
<u> </u>	1100	24.4	76.9	Start-up
11/09/2003		21.7	312	Shuldown
11/10/2003		36.6	254.8	Start-up
<u> </u>	2300	10.8	176.9	Shutdown
11/11/2003		25.2	136.8	Start-up
11/12/2003		9.9	213.3	Shutdown
<b> </b>	1000	38.1	194.5	Start-up
<u></u> _	2300	15.2	661.7	Shutdown
11/13/2003		33.7	372.1	Start-up
	0900	20.8	90.5	Start-up
11/17/2003		9.9	98.8	Shutdown
	0600	48.3	348.7	Start-up
11/18/2003	<del></del>	13.4	190.4	Shutdown
11/19/2003	<del></del>	23.5	129.3	Start-up Shutdown
 	2300	17.1	65.4	Shutdown
11/20/2003	<del></del>	46.2	314.3	Start-up
11/21/2003		6.8	64	Shutdown
11/22/2003		23.6	448.6	Start-up
<u> </u>	0800	33.6	186.9	Start-up
<u></u>	2300	27	1358.4	Shutdown
11/23/2003	<del></del>	25.6	118.4	Start-up
11/24/2003	<del></del>	14.7	194.4	Shutdown
<b></b>	0700	42.9	396.3	Start-up
11/25/2003		6.6	66.9	Shutdown
<u> </u>	0600	12.6	518.5	Start-up
<u> </u>	0700	12.2	120.7	Start-up
11/26/2003		41.9	1095.3	Shutdown
	0600	40.4	462.7	Start-up
<u></u>	0700	15.8	53.7	Start-up
11/27/2003	<del></del>	8.9	·	Snutdown
<b> </b>	0800	-	30,2	Start-up
	0900	26.6	158 6	Start-up
11/28/2003		23.6	463.8	Start-up
<u> </u>	0900	29.3	203.8	Start-up
				Chutdows
12/02/2003		8.8	156.7	Shutdown
12/02/2003	0600	-	192.1	Start-up
	0600 0700	26.3	192.1 109.8	Start-up Start-up
12/02/2003	0600 0700 0000	26.3 11.3	192.1 109.8 130.3	Start-up Start-up Shutdown
12/04/2003	0600 0700 0000 0600	26.3 11.3 43.3	192.1 109.8 130.3 245.8	Start-up Start-up Shutdown Start-up
	0600 0700 0000 0600 0200	26.3 11.3 43.3	192.1 109.8 130.3 245.8 240.6	Start-up Start-up Shutdown Start-up Shutdown
12/04/2003	0600 0700 0000 0600 0200	26.3 11.3 43.3 10 27	192.1 109.8 130.3 245.8 240.6 414.1	Start-up Start-up Shutdown Start-up Shutdown Start-up
12/04/2003	0600 0700 0000 0600 0200 0600 0700	26.3 11.3 43.3 10 27 17.7	192.1 109.8 130.3 245.8 240.6 414.1 89.6	Start-up Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Start-up
12/04/2003	0600 0700 0000 0600 0200 0600 0700	26.3 11.3 43.3 10 27 17.7 12.2	192.1 109.8 130.3 245.8 240.6 414.1 89.6	Start-up Start-up Shutdown Start-up Shutdown Start-up Start-up Start-up Shutdown
12/04/2003 12/05/2003 12/09/2003	0600 0700 0000 0600 0200 0600 0700 0200	26.3 11.3 43.3 10 27 17.7 12.2 41.8	192.1 109.8 130.3 245.8 240.6 414.1 89.6 151.8 237.4	Start-up Start-up Shutdown Start-up Shutdown Start-up Start-up Start-up Shutdown Start-up Shutdown Start-up
12/04/2003 12/05/2003 12/09/2003 12/14/2003	0600 0700 0000 0600 0200 0600 0700 0200 0700	26.3 11.3 43.3 10 27 11.7 12.2 41.8 15.8	192.1 109.8 130.3 245.8 240.6 414.1 89.6 1151.8 237.4 182.7	Start-up Start-up Shutdown Start-up Shutdown Start-up Start-up Start-up Start-up Shutdown Start-up Shutdown Start-up Shutdown
12/04/2003 12/05/2003 12/09/2003	0600 0700 0000 0600 0200 0600 0700 0200 0700 1900	26.3 11.3 43.3 10 27 17.7 12.2 41.8 15.8 52.1	192.1 109.8 130.3 245.8 240.6 414.1 89.6 151.8 237.4 182.7 295.9	Start-up Start-up Shutdown Start-up Shutdown Start-up Start-up Start-up Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Shutdown
12/04/2003 12/05/2003 12/09/2003 12/14/2003 12/21/2003	0600 0700 0000 0600 0200 0600 0700 0200 0700 1900 0200	26.3 11.3 43.3 10 27 17.7 12.2 41.8 15.8 52.1 54.5	192.1 109.8 130.3 245.8 240.6 414.1 89.6 1151.8 237.4 182.7 295.9 376.2	Start-up Start-up Shutdown Shutdown Shutdown Shutdown
12/04/2003 12/05/2003 12/09/2003 12/14/2003	0600 0700 0000 0600 0200 0600 0700 0200 0700 1900 0200 0300 0600	26.3 11.3 43.3 10 27 17.7 12.2 41.8 15.8 52.1 54.5	192.1 109.8 130.3 245.8 240.6 414.1 89.6 1151.8 237.4 182.7 295.9 376.2 435.7	Start-up Start-up Start-up Shutdown Start-up Shutdown Start-up Start-up Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Shutdown Shutdown Shutdown Shutdown Shutdown
12/04/2003 12/05/2003 12/09/2003 12/14/2003 12/21/2003 12/23/2003	0600 0700 0000 0600 0200 0600 0700 0700	26.3 11.3 43.3 10 27 17.7 12.2 41.8 15.8 52.1 54.5 19.6	192.1 109.8 130.3 245.8 240.6 414.1 89.6 1151.8 237.4 182.7 295.9 376.2 435.7 221.9	Start-up Start-up Start-up Shutdown Start-up Shutdown Start-up Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Shutdown Shutdown Shutdown Shutdown Start-up Start-up
12/04/2003 12/05/2003 12/09/2003 12/14/2003 12/21/2003 12/23/2003	0600 0700 0000 0600 0200 0600 0700 0200 0700 1900 0200 0300 0600 0700	11.3 43.3 10 27 17.7 12.2 41.8 15.8 52.1 54.5 19.6 40 8.2	192.1 109.8 130.3 245.8 240.6 414.1 89.6 1151.8 237.4 182.7 295.9 376.2 435.7 221.9	Start-up Start-up Start-up Shutdown Start-up Shutdown Start-up Start-up Shutdown Start-up Shutdown
12/04/2003 12/05/2003 12/09/2003 12/14/2003 12/21/2003 12/23/2003	0600 0700 0000 0600 0200 0600 0700 0700 1900 0200 0300 0600 0700 2300 0600	11.3 43.3 10 27 17.7 12.2 41.8 15.8 52.1 54.5 19.6 40 8.2	192.1 109.8 130.3 245.8 240.6 414.1 89.6 1151.8 237.4 182.7 295.9 376.2 435.7 221.9 101.7 470.7	Start-up Start-up Start-up Shutdown Start-up Shutdown Start-up Start-up Shutdown Start-up Shutdown Shutdown Shutdown Shutdown Start-up Shutdown Shutdown Shutdown Start-up Shutdown Start-up Start-up Start-up
12/04/2003 12/05/2003 12/09/2003 12/14/2003 12/21/2003 12/23/2003	0600 0700 0000 0600 0200 0600 0700 0200 0700 1900 0200 0300 0600 0700 2300 0600 0700	26.3 11.3 43.3 10 27 17.7 12.2 41.8 15.8 52.1 54.5 19.6 40 8.2 42 33.1	192.1 109.8 130.3 245.8 240.6 414.1 89.6 1151.8 237.4 182.7 295.9 376.2 435.7 221.9 101.7 470.7	Start-up Start-up Start-up Shutdown Start-up Shutdown Start-up Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Shutdown Shutdown Shutdown Start-up
12/04/2003 12/05/2003 12/09/2003 12/14/2003 12/21/2003 12/25/2003 12/27/2003	0600 0700 0000 0600 0200 0700 0700 0700 1900 0200 0300 0600 0700 2300 0600 0700	26.3 11.3 43.3 10 27 17.7 12.2 41.8 15.8 52.1 54.5 19.6 40 8.2 42 33.1 5.3	192.1 109.8 130.3 245.8 240.6 414.1 89.6 1151.8 237.4 182.7 295.9 376.2 435.7 221.9 101.7 470.7 177.5	Start-up Start-up Start-up Shutdown Start-up Shutdown Start-up Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Start-up Start-up Start-up Start-up Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown
12/04/2003 12/05/2003 12/05/2003 12/09/2003 12/14/2003 12/21/2003 12/25/2003 12/27/2003	0600 0700 0000 0600 0200 0600 0700 0700 1900 1900 0200 0300 0600 0700 2300 0600 0700 1100	26.3 11.3 43.3 10 27 117.7 12.2 41.8 15.8 52.1 54.5 19.6 40 8.2 42 33.1 5.3	192.1 109.8 130.3 245.8 240.6 414.1 89.6 1151.8 237.4 182.7 295.9 376.2 435.7 221.9 101.7 470.7 177.5 32 2403.3	Start-up Start-up Start-up Shutdown Start-up Shutdown Start-up Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Start-up Start-up Start-up Start-up Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Shutdown
12/04/2003 12/05/2003 12/05/2003 12/09/2003 12/14/2003 12/21/2003 12/25/2003 12/25/2003 12/25/2003	0600 0700 0000 0600 0200 0600 0700 0700 1900 0200 0300 0600 0700 2300 0600 0700 1102 0100	26.3 11.3 43.3 10 27 17.7 12.2 41.8 15.8 52.1 54.5 19.6 40 8.2 42 33.1 5.3 6.1	192.1 109.8 130.3 245.8 240.6 414.1 89.6 151.8 237.4 182.7 295.9 376.2 435.7 221.9 101.7 470.7 177.5 32 2403.3 426.6	Start-up Start-up Start-up Shutdown Start-up Shutdown Start-up Start-up Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Shutdown Shutdown Start-up Shutdown Start-up Start-up Start-up Shutdown Start-up Start-up Shutdown Start-up Start-up Shutdown
12/04/2003 12/05/2003 12/05/2003 12/09/2003 12/14/2003 12/21/2003 12/25/2003 12/27/2003	0600 0700 0700 0600 0600 0200 0700 0700 1900 0200 0300 0600 0700 2300 0600 0700 1100 1100 1100 1100	26.3 11.3 43.3 10 27 17.7 12.2 41.8 15.8 52.1 54.5 19.6 40 8.2 42 33.1 5.3 3.1 45.2 13.2	192.1 109.8 130.3 245.8 240.6 414.1 89.6 151.8 237.4 182.7 295.9 376.2 435.7 221.9 101.7 470.7 177.5 32 2403.3 426.6 663.1	Start-up Start-up Start-up Shutdown Start-up Shutdown Start-up Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Shutdown Shutdown Shutdown Shutdown
12/04/2003 12/05/2003 12/05/2003 12/09/2003 12/14/2003 12/21/2003 12/25/2003 12/25/2003 12/25/2003	0600 0700 0000 0600 0200 0600 0700 0700 1900 0200 0300 0600 0700 2300 0600 0700 1100 0100 0100 0100	26.3 11.3 43.3 10 27 17.7 12.2 41.8 15.8 52.1 54.5 19.6 40 8.2 42 33.1 5.3 8.1 45.2 13.2 39.4	192.1 109.8 130.3 245.8 240.6 414.1 89.6 151.8 237.4 182.7 295.9 376.2 435.7 221.9 101.7 470.7 177.5 32 2403.3 426.6 663.1 377.7	Start-up Start-up Start-up Shutdown Shutdown Start-up Start-up Start-up Start-up Shutdown Start-up Start-up Shutdown Start-up
12/04/2003 12/05/2003 12/05/2003 12/09/2003 12/14/2003 12/21/2003 12/25/2003 12/25/2003 12/25/2003	0600 0700 0000 0600 0200 0600 0700 0200 0700 1900 0200 0300 0600 0700 2300 0600 0700 1100 0100 0100 0100 0600	26.3 11.3 43.3 10 27 17.7 12.2 41.8 15.8 52.1 54.5 19.6 40 8.2 42 33.1 5.3 3.1 45.2 13.2	192.1 109.8 130.3 245.8 240.6 414.1 89.6 1151.8 237.4 182.7 295.9 376.2 435.7 221.9 101.7 470.7 177.5 32 2403.3 426.6 663.1 377.7 77.4	Start-up Start-up Start-up Shutdown Shutdown Start-up Shutdown Start-up Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown
12/04/2003 12/05/2003 12/05/2003 12/14/2003 12/21/2003 12/23/2003 12/27/2003 12/27/2003 12/28/2003 12/29/2003 12/29/2003	0600 0700 0700 0600 0600 0600 0700 0700	11.3 43.3 10. 27 17.7 12.2 41.8 15.8 52.1 54.5 19.6 40 8.2 42 33.1 5.3 8.1 45.2 13.2 39.4 22.8	192.1 109.8 130.3 245.8 240.6 414.1 89.6 151.8 237.4 182.7 295.9 376.2 435.7 221.9 101.7 470.7 177.5 32 2403.3 426.6 663.1 377.7 77.4	Start-up Start-up Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Shutdown Shutdown Shutdown Shutdown Start-up Start-up Start-up Start-up Start-up Start-up Start-up Start-up Start-up Shutdown
12/04/2003 12/05/2003 12/05/2003 12/09/2003 12/14/2003 12/21/2003 12/25/2003 12/25/2003 12/25/2003	0600 0700 0700 0600 0600 0200 0700 0700	25.3 11.3 43.3 10 27 17.7 12.2 41.8 15.8 52.1 54.5 19.6 40 8.2 42 33.1 5.3 3.1 5.3 3.1 5.3 4.5 13.2 39.4 22.8 •	192.1 109.8 130.3 245.8 240.6 414.1 89.6 1151.8 237.4 182.7 295.9 376.2 435.7 221.9 101.7 470.7 177.5 32 2403.3 426.6 663.1 377.7 77.4 1157.2 250.1	Start-up Start-up Start-up Shutdown Start-up Shutdown Start-up Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Shutdown Shutdown Start-up Start-up Start-up Shutdown Start-up Start-up Start-up Start-up Shutdown
12/04/2003 12/05/2003 12/05/2003 12/14/2003 12/21/2003 12/23/2003 12/27/2003 12/27/2003 12/28/2003 12/29/2003 12/29/2003	0600 0700 0700 0600 0600 0600 0700 0700	11.3 43.3 10. 27 17.7 12.2 41.8 15.8 52.1 54.5 19.6 40 8.2 42 33.1 5.3 8.1 45.2 13.2 39.4 22.8	192.1 109.8 130.3 245.8 240.6 414.1 89.6 151.8 237.4 182.7 295.9 376.2 435.7 221.9 101.7 470.7 177.5 32 2403.3 426.6 663.1 377.7 77.4	Start-up Start-up Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Start-up Shutdown Shutdown Shutdown Shutdown Shutdown Start-up Start-up Start-up Start-up Start-up Start-up Start-up Start-up Start-up Shutdown

<sup>\*</sup> Data not excluded.

#### BAYSIDE POWER STATION - CT 1A MAINTENANCE/REPAIR OF CEMS - QUARTER 4, 2003

Date	Unusual Maint, Or Repair of CEMS : 基本法。
10/18/2003	Replaced Umbilical on Unit 1A CEM System
<b></b>	

## BAYSIDE POWER STATION - CT 1A MONITOR DOWNTIME - QUARTER 4, 2003

Date	Hours of Missing Data for Monitor Downtime	Reason for Monitor Downtime 為於
10/07/2003	3	CO Monitor failed Calibration/ Re-calibration
10/10/2003	2	CO Monitor failed Calibration/ Re-calibration
10/14/2003	14	CO Monitor failed Calibration/ Re-calibration
10/15/2003	14	CO calibration monitor problems
10/18/2003		Replaced Umbilical on Unit 1A CEM System
-		

	Q7 37% li
The state of the s	97.37%
Monitor availability and the second s	0,.0,,0
IMIDDITO AVAILADIUV 2507 10 250 270 270 270 270 270 270 270 270 270 27	
Bittoriitor exterior	



#### 40CFR75 - APPENDIX A **RELATIVE ACCURACY TEST AUDIT**

Customer: Tampa Electric Company Facility: Bayside Power Station

Source: CT-1A

Test Date:

11/21/03

			_		ices Group -		Continuous Emissions Monitor	<b></b>	-
Run	Run	Times	Unit F	$RM - 7E NO_{x}$	$_{1}$ RM - 3A $O_{2}$	RM - 19 NO <sub>x</sub>	RM - 19 NO <sub>x</sub>	Difference	Run
Number	Start	Stop	Load	ppmvd	%v, dry	lbs/mmBtu	lbs/mmBtu	lbs/mmbtu	Flag
1	11:07	11:39	160	3.75	14.18	0.012	0.011	0.001	1
2	11:51	12:12	159	3.78	14.29	0.012	0.011	0.001	1
3	12:21	12:42	159	3.78	14.29	0.012	0.011	0.001	1
4	12:50	13:11	158	3.78	14.31	0.012	0.011	0.001	1
5	13:19	13:40	158	3.78	14.31	0.012	0.011	0.001	1
6	13:48	14:09	157	3.88	14.31	0.013	0.011	0.002	1
7	14:19	14:40	157	3.78	14.32	0.012	0.011	0.001	1
8	14:50	15:11	157	3.78	14.32	0.012	0.011	0.001	1
9	15:18	15:39	157	3.78	14.32	0.012	0.011	0.001	1
		Means:	158			0.012	0.011	0.001	

Standard Deviation of Differences: 0.000

Number of Valid Runs Included in Data Set:

9 t-value for Data Set: 2.306

2.5% Error Confidence Coefficient (CC) for Data Set:

0.000 11.29

Relative Accuracy (RA), Calculated Against Mean Reference Method Value: Relative Accuracy (RA), Calculated As Mean Difference, Alternative Performance Specification (APS): 0.001

Bias Test: FAILED

1.101

Bias Adjustment Factor (BAF):

N/A Alternative Bias Adjustment Factor (BAF):



#### 40CFR75 - APPENDIX A RELATIVE ACCURACY TEST AUDIT

Customer: Tampa Electric Company

Facility: Bayside Power Station

Source: CT-1A

Test Date:

11/21/03

Run	Run 1		Unit	Air Services Group - Test Data RM - 3A CO₂, % volume dry	Continuous Emissions Monitor CO <sub>2</sub> , % volume dry	Difference CO <sub>2</sub> , % volume d	Run ry Flag
Number	Start	Stop	Load		4,161	-0.211	1
1	11:07	11:39	160	3.95	4.162	-0.202	1
2	11:51	12:12	159	3.96	4.162	-0.182	1
3	12:21	12:42	159	3.98	4.157	-0.187	1
4	12:50	13:11	158	3.97	4,156	-0.176	1
5	13:19	13:40	<b>15</b> 8	3.98	4.150	-0.200	1
6.	13:48	14:09	157	3.95	4.148	-0.198	1
7	14:19	14:40		3.95	4.140	-0.190	1
8	14:50	15:11	157	3.95	4.140	-0.190	1
9	15:18	15:39	157	3.95	4.153	-0.193	
		Means	: 158	3.960			

0.011 Standard Deviation of Differences: Number of Valid Runs Included in Data Set: 9 2.306 t-value for Data Set:

2.5% Error Confidence Coefficient (CC) for Data Set: 0.008 5.08

Relative Accuracy (RA):



#### 40CFR60 - APPENDIX B, PERFORMANCE SPECIFICATION 4 **RELATIVE ACCURACY TEST AUDIT**

Customer: Tampa Electric Company Facility: Bayside Power Station

Source: CT-1A

Test Date:

11/21/03

Applicable Standard: 7.8 ppmvd CO @ 15% O<sub>2</sub>

Air Services Group - Test Data						- Test Data	Continuous	Emissions Monitor	Difference	
Run	Run	Times	Unit	RM -10 CO	RM - 3A O <sub>2</sub>	co	co	co	CO	Run
Number	Start	Stop	Load	ppmvd	<b>%v</b> , dry	ppmvd @ 15% O₂	ppmvd	ppmvd @ 15% O <sub>2</sub>	ppmvd @ 15% O <sub>2</sub>	Flag
1	11:07	11:39	160	0.64	14.18	0.559	0.60	0.500	0.059	<del>1</del>
2	11:51	12:12	<b>15</b> 9	0.77	14.29	0.691	<b>0</b> .60	0.500	0.191	1
3	12:21	12:42	<b>15</b> 9	0.69	14.29	0.614	0.60	0.495	0.119	1
4	12:50	13:11	<b>15</b> 8	0.70	14.31	0.626	0.60	0.491	0.135	1
5	13:19	13:40	158	0.69	14.31	0.617	0.60	0.486	0.131	1
6	13:48	14:09	157	0.77	14.31	0.693	<b>0</b> .60	0.491	0.202	1
7	14:19	14:40	157	0.76	14.32	0.683	0.60	0.500	0.183	1
8	14:50	15:11	157	0.84	14.32	0.757	0.60	0.495	0.262	1
9	15:18	15:39	157	0.84	14.32	0.757	0.60	0.495	0.262	1
•	,	Means:	158	_	•	0.666	•	0.495	0.172	

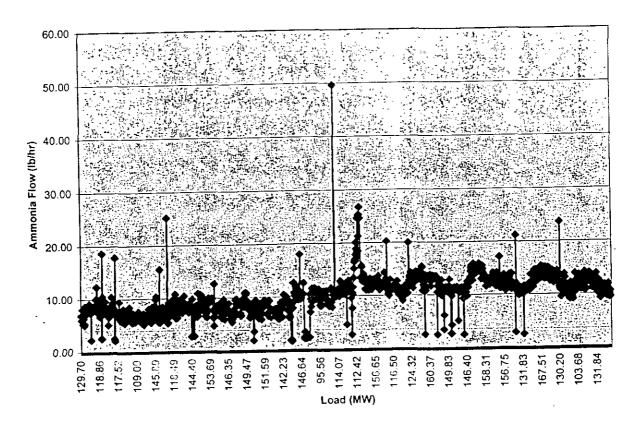
0.067 Standard Deviation of Differences: Number of Valid Runs Included in Data Set: 9

2.306 t-value for Data Set: 0.052 2.5% Error Confidence Coefficient (CC) for Data Set:

Relative Accuracy (RA), Calculated Against Mean Reference Method Value: 33.51 %

Relative Accuracy (RA), Calculated Against Applicable Standard:

2.86



BAYSIDE POWER STATION - CT 1B 24 - HOUR BLOCK AVERAGE - QUARTER 4, 2003

Date		24-hour block NOx-
10/01/2003	1.6	3.0
10/02/2003	1.2	3.1
10/03/2003	1.9	3.0
10/04/2003	1.2	3.0
10/05/2003	1.2	2.9
10/06/2003	1.3	2.9
10/07/2003		3.0
10/08/2003		2.9
10/09/2003		3.1
10/10/2003		2.9
10/11/2003		3.0
10/12/2003		2.9
10/13/2003	<del> </del>	2.9
10/14/2003	<del></del>	2.9
10/15/2003	<del> </del>	2.9
10/16/2003		2.9
10/17/2003	1.3	3.0
10/18/2003	<del></del>	2.9
10/19/2003	<del></del>	2.9
10/20/2003		2.9
10/21/2003	1.3	3.0
10/22/2003	<del></del>	2.9
10/23/2003	1.3	2.9
10/24/2003	1.3	2.9
10/25/2003	1.7	3.2
10/26/2003	1.3	2.9
10/27/2003		2.9
10/28/2003		3.0
10/29/2003		2.9
10/30/2003		2.9
10/31/2003	1.3	2.9
11/01/2003		2.9
11/02/2003	1.3	2.9
11/03/2003	1.4	2.9
11/04/2003	1.6	3.0
11/05/2003		2.9
11/06/2003		2.9
11/07/2003		3.1
11/03/2003		3.1
11/09/2003		3.0
11/10/2003		2.9
11/11/2003		2.9
11/12/2003	0.7	2.9
11/13/2003	<del></del>	3.0
11/14/2003	<del></del>	2.9
11/15/2003	<del></del>	2.9
11/16/2003	<del></del>	2.9
11/17/2003	<del></del>	2.9
11/18/2003	<del></del>	2.9
	1	

11/19/2003	8.0	2.9
11/20/2003	0.8	2.9
11/21/2003	0.9	2.9
11/22/2003	8.0	2.9
11/23/2003	0.9	2.9
11/24/2003	8.0	2.9
11/25/2003	0.9	2.9
11/26/2003	0.9	2.9
11/27/2003	1.0	2.9
11/28/2003	0.9	2.9
11/29/2003	1.0	3.2
11/30/2003	0.9	2.9
12/01/2003	1.0	2.9
12/02/2003	1.0	2.9
12/03/2003	0.9	2.9
12/04/2003	0.9	2.9
12/05/2003	1.0	3.0
12/06/2003	1.1	2.9
12/07/2003	1.1	2.9
12/08/2003	1.1	2.9
12/09/2003	1.2	2.9
12/10/2003	Offline	Offline
12/11/2003	Offline	Offline
12/12/2003	Offline	Offline
12/13/2003	Offline	Offline
12/14/2003	Offline	Offline
12/15/2003	Offline	Offline
12/16/2003	Offline	Offline
12/17/2003	Offline	Offline
12/18/2003	Offline	Offline
12/19/2003	Offline	Offline
12/20/2003	Offline	Offline
12/21/2003	Offline	Offline
12/22/2003	Offline	Offline
12/23/2003	1.2	2.9
12/24/2003	0.0	5.0
12/25/2003	Offline	Offline
12/26/2003	1.2	2.9
12/27/2003	1.2	2.9
12/28/2003	1.5	2.9
12/29/2003	1.6	2.9
12/30/2003	Offline	Offline
12/31/2003	1.3	2.9

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

### BAYSIDE POWER STATION - CT 1B EXCLUDED DATA - QUARTER 4, 2003

	Hours Data	NOx Value of	Excluded Data	Reason for Exclusion
Date	Excluded	32.6	217.4	Start-up
10/01/2003		26.2	1445.5	Shutdown
	2400	21.6	151.4	Start-up
10/02/2003		21.0	47.2	Shutdown
	2300		2256	Shutdown
	2400	35.1	446.6	Start-up
10/03/2003		13.5	*	Start-up
	0800		791.3	Shutdown
	2300	40.1	216.4	Start-up
10/04/2003		104.0	157	Start-up
	0700	34.9	41.6	Shutdown
10/07/2003		<u> </u>		Shutdown
	0200		2282.3	Start-up
	0500	43.1	446.6	Start-up
	0600	10.4	105.0	
10/08/2003	2300	9.3	165.8	Shutdown
10/09/2003	3 0600	36	286.8	Start-up
	2300		64.8	Shutdown
10/10/2003	3 0600	*	100.8	Start-up
	0700	17.2	110.4	Start-up
	2200	[+	17.1	Shutdown
	2300	35.8	1476.9	Shutdown
10/11/2003	3 0800		14.2	Start-up
	0900	2.4	91.6	Start-up
	2200	8.8	165.8	Shutdown
10/12/2003		40.1	388.1	Start-up
10, 12,200	0800	36.8	10.8	Start-up
	2300	20	879.9	Shutdown
10/13/200	_ 1	34.1	440.4	Start-up
10/13/200	0700	17.1	56.5	Start-up
	2400	9.3	118.6	Shutdown
10/14/200	_ l	16.9	610.7	Start-up
10/14/200	0600	18.1	65	Start-up
<del> · - · - · - · - · - · - · · - · · - · · - ·</del>	2200	19.6	352.4	Shutdown
10/15/200		10.0	4	Start-up
10/15/200	0600	20.2	82.2	Start-up
	2300	34.1	430.7	Shutdown
101101000		12.5	426.7	Start-up
10/16/200		28	99.1	Start-up
	0600	9.1	101.9	Shutdown
	2100		411.6	Start-up
10/17/200		27.3	57.1	Start-up
	0500	13.4	1116.9	Shutdown
10/18/200		32.5	239.9	Start-up
	0700	45.7		Shutdown
10/19/200		21.4	350.1	Start-up
	0800	16.6	493.1	Start-up
	0900	15.9	49.2	Shutdown
10/20/200	03 0100	12.2	167.8	
	0600	27.7	398.8	Start-up

0700	14.9	51.2	Start-up
10/21/2003 2300	45.3	1032.6	Shutdown
10/21/2003 2300	19.6	607.6	Start-up
0700	20.5	75.1	Start-up
2100	6.5	65	Shutdown
10/23/2003 0700	42.3	424.8	Start-up
0800	20.9	69.9	Start-up
2300	10.1	155.6	Shutdown
10/24/2003 0600	42.5	287.2	Start-up
0700	24.3	98.2	Start-up
2300	16.3	399.9	Shutdown
10/25/2003 0800	34.5	178.2	Start-up
2400	6.7	227.4	Shutdown
10/26/2003 0900	20.7	112.6	Start-up
	8	140.7	Shutdown
2400	43.1	211.4	Start-up
10/27/2003 0600 2400	*	32.5	Shutdown
	*	1916.6	Shutdown
10/28/2003 0100 0600	21.2	108.2	Start-up
	18.7	276.7	Shutdown
2300	39.5	157.1	Start-up
10/29/2003 1100	11.7	147.7	Shutdown
2400	11.7	462.8	Start-up
10/30/2003 0700	27.6	73.3	Start-up
0800	7.3	261.9	Shutdown
2200		440.7	Start-up
10/31/2003 0900	36.9	18.3	Start-up
1000	15.1	180.6	Shutdown
11/01/2003 2100	7.1	311.8	Start-up
11/03/2003 1200	42.6	89.1	Start-up
1300	28.7 6.5	257	Shutdown
2200	29.2	176	Start-up
11/04/2003 1200	12.5	384.7	Shutdown
2400		142.5	Start-up
11/05/2003 1300	7.5	86	Shutdown
11/08/2003 0100	30.3	475.9	Start-up
0900		383	Shutdown
11/09/2003 0100	8.9	[488.8]	
1000	41.6	113.2	Start-up
1100	15.3	132.1	Shutdown
2000	11.6	201.9	Start-up
11/10/2003 1000	37.6		Start-up
1100	12.1	96.1	Shutdown
11/13/2003 2200	29.9	343.3	Start-up
11/14/2003 0700	50.7	333	Start-up
0800	22.8	52.7	Start-up
11/15/2003 0100	32.6	412.1	
0800	21.9	103.4	Start-up
11/17/2003 2200	13.2	182.6	Shutdown
11/18/2003 1300	27.8	143.3	Start-up
11/20/2003 2300	16.2	705.7	Shutdown
11/21/2003 0500	26.5	441.6	Start-up
0600	23.8	62.9	Start-up

	2400	11.1	145.6	Shutdown
11/22/2003		29.7	452.8	Start-up
	1100	27.5	111.2	Start-up
	2400	8.6	99	Shutdown
11/23/2003		23.1	508.5	Start-up
	1000	33.4	168.2	Start-up
11/24/2003		7	253.3	Shutdown
	0600	14.3	451.2	Start-up
	0700	25.2	93.7	Start-up
11/29/2003		12.9	151.4	Shutdown
	0600	84.7	149.2	Start-up
12/01/2003		12.2	142.4	Shutdown
12/02/2003		39.2	224.7	Start-up
12/04/2003		9.4	364.2	Shutdown
	0700	43.1	219.1	Start-up
12/05/2003		*	54.6	Shutdown
12/00/2000	2400	*	2231.1	Shutdown
12/06/2003		41.9	416.1	Start-up
12,00,2000	0900	17.4	57.9	Start-up
12/08/2003		8.7	163	Shutdown
12/09/2003		37.8	174.2	Start-up
	2300	8.8	148.6	Shutdown
12/23/2003		44.9	377.9	Start-up
1 2 2 2 2 2 2 2 2	0400	35	113.3	Start-up
12/24/2003		7.1	167.9	Shutdown
12/26/2003		41	322.1	Shutdown
12:20:200	0600	76	201.7	Start-up
	1400	46.5	267.8	Start-up
12/29/2003		31.5	718.8	Shutdown
1	0600	32	373.9	Start-up
<del></del>	0700	25.7	71.3	Start-up
	1100	18	364.9	Shutdown
12/31/2003		7.8	651.2	Start-up
	1000	46.3	205.8	Start-up

<sup>\*</sup> Data not excluded.

#### BAYSIDE POWER STATION - CT 1B MAINTENANCE/REPAIR OF CEMS - QUARTER 4, 2003

Unusual Maint. Or Repair of CEMS
No Unusual Maintenance of CEMS

#### BAYSIDE POWER STATION - CT 1B MONITOR DOWNTIME - QUARTER 4, 2003

Date 🕹 😅	Hours of Missing Data for Monitor Downtime	Reason for Monitor Downtime
<u> </u>		
<del> </del>		
<del> </del>		
ļ		
<del></del>		
<u></u>	<u></u>	

		100%
I The second of	(A. 27% Mr. 497) NSC C. 45 (4.07) NS	71319%
Monitor availability	(2) (2) (2) (3) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	10070
IUVIDIIIOI AVAIIADIIILV.	30 3, 144	

RATA data required pursuant to these CFRs

NOx: 40 CFR 75, Appendix B CO: 40 CFR 60, Appendix F RATA data Date

#### MONITORING DATA CHECKING SOFTWARE 4.1 BETA

05/28/2003

TEST SUMMARY REPORT

PAGE 1

State: FL ORIS Code: 7873

County: HILLSBOROUGH Facility Name: BAYSIDE

Unit

Reported Recalculated

Sys Comp Test Stack

Test Test Hour/ Test Load

End Date Time # Lvls Reason Result Result ID Comp/Sys Parm Type Type

CT1B /213 NOX RATA (RT 610-616)

04/17/2003 1209 1 1 C .Pass-APS Pass-APS

05/28/2003

MONITORING DATA CHECKING SOFTWARE 4.1 BETA

PAGE 2 RATA REPORT (RT 610/611)

7873 ORIS Code:

Facility: BAYSIDE

State:

Unit/Stack ID: CT1B

System ID: 213

Parameter: NOX

Test End Date/Time: 04/17/2003 1209 Test No.: 1 # of Operating Levels: 1

Units of Measure: LB/MMBTU

Reason for Test: C

Performance Spec: <= 10.0%

Next RATA: Four Op Qtrs

Recalc. Results: Pass-APS Reported Results: Pass-APS

% RA: 9.09 Mean Diff: % RA: 9.09 Mean Diff: 0.001 BAF: 1.100 0.001 BAF: 1.100

Operating Level: H

•	Start		End Run	Rel	ference	Monitoring	Gross L	,oad	
Run	Start Date	Time	End Date	Time S	Status	Method	Value	or Velocity	
===	========	====	========	=====	=====	========	=======	========	=======================================
1	04/17/2003	0702	04/17/2003	0723	1	0.011	0.010	164	
			04/17/2003			0.011	0.010	163	
3	04/17/2003	0809	04/17/2003	0830	1	0.011	0.010	162	
4	04/17/2003	0850	04/17/2003	0911	1	0.011	0.010	160	
			04/17/2003			0.011	0.010	160	
6	04/17/2003	1000	04/17/2003	1021	1	0.011	0.010	159	
7	04/17/2003	1035	04/17/2003	1056	1	0.011	0.010	158	
3	04/17/2003	1116	04/17/2003	1137	1	0.011	0.010	157	
9	04/17/2003	1148	04/17/2003	1209	1	0.011	0.010	157	

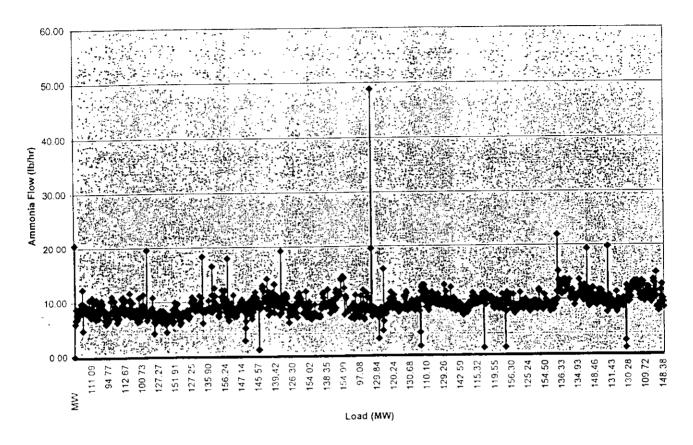
Summary Statistics

Reported Recalculated

0.010 0.010 Mean of Monitoring System Mean of Reference Method Values 0.011 0.011 0.001 0.001 Mean of Difference Standard Deviation of Difference 0.000 0.000 Confidence Coefficient 0.000 0.000 2.306 2.306 T-Value 9.09 9.09 Relative Accuracy:

1,100 1.100 Bias Adjustment Factor APS Flag N Ν Indicator of Normal Op. Level 160 160 Gross Unit Load or Velocity

Reference Method Used 7e,3a



Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 24

BAYSIDE POWER STATION - CT 1C 24 - HOUR BLOCK AVERAGE - QUARTER 4, 2003

24 - HOUR	BLOCK AVERAGE	QUARTER 4, 2003
Date	24-hour block CO	24-hour block NOx
10/01/2003	0.9	2.9
10/02/2003	1.0	2.9
10/03/2003	0.8	2.9
10/04/2003	0.9	2.9
10/05/2003	0.9	2.9
10/06/2003	1.0	2.9
10/07/2003	1.0	2.9
10/08/2003	1.0	2.9
10/09/2003	0.9	2.9
10/10/2003	1.1	2.9
10/11/2003	1.2	3.1
10/12/2003	0.9	2.9
10/13/2003	<del></del>	2.9
10/14/2003	0.9	2.9
10/15/2003	0.8	2.9
10/16/2003	0.7	2.9
10/17/2003	1.0	2.9
10/18/2003		2.9
10/19/2003		2.9
10/20/2003	1.0	3.0
10/21/2003	1.0	2.8
10/22/2003	0.9	2.9
10/23/2003		2.9
10/24/2003	1.0	2.9
10/25/2003		2.9
10/26/2003	<del></del>	2.9
10/27/2003		2.9
10/28/2003		0.0
10/29/2003		2.9
10/30/2003		2.9
10/31/2003	<del></del>	3.1
11/01/2003		2.9
11/02/2003		2.9
11/03/2003		Ofiline
11/04/2003	0.9	2.9
11/05/2003		2.9
11/06/2003	1.0	2.9
11/07/2003	1.2	2.9
11/08/2003		2.9
11/09/2003	1.0	2.9
11/10/2003	0.7	2.9
11/11/2003		2.8
11/12/2003		2.9
11/13/2003		1.8
11/14/2003	0.5	2.9
11/15/2003	0.5	2.9
11/16/2003	0.4	2.9
11/17/2003	0.4	3.0
11/18/2003	0.6	3.1

11/20/2003         0.4         2.9           11/21/2003         0.5         2.9           11/22/2003         0.5         2.9           11/23/2003         0.5         2.9           11/24/2003         0.4         2.9           11/25/2003         0.5         2.9           11/26/2003         0.6         2.9           11/28/2003         0.6         2.9           11/29/2003         0.6         2.9           11/30/2003         0.5         2.9           11/30/2003         0.5         2.9           12/01/2003         0.6         2.9           12/02/2003         0.5         2.9           12/03/2003         0.5         2.9           12/04/2003         0.5         2.9           12/05/2003         0.5         2.9           12/05/2003         0.5         2.9           12/05/2003         0.6         2.9           12/07/2003         0.6         2.9           12/09/2003         0.6         2.9           12/10/2003         0.7         2.9           12/11/2003         0.6         2.9           12/11/2003         0.6         3.1 <th>11/19/2003</th> <th>0.3</th> <th>2.9</th>	11/19/2003	0.3	2.9
11/21/2003         0.5         2.9           11/22/2003         0.5         2.9           11/23/2003         0.5         2.9           11/24/2003         0.4         2.9           11/25/2003         0.5         2.9           11/26/2003         0.6         2.9           11/29/2003         0.6         2.9           11/29/2003         0.8         2.9           11/30/2003         0.5         2.9           12/01/2003         0.6         2.9           12/01/2003         0.5         2.9           12/02/2003         0.5         2.9           12/03/2003         0.5         2.9           12/04/2003         0.5         2.9           12/05/2003         0.5         2.9           12/06/2003         0.6         2.9           12/07/2003         0.6         2.9           12/10/2003         0.6         3.1           12/09/2003         0.7         2.9           12/11/2003         0.6         2.9           12/11/2003         0.6         2.9           12/11/2003         0.6         3.1           12/15/2003         0.6         3.1 <td></td> <td></td> <td></td>			
11/22/2003         0.5         2.9           11/23/2003         0.5         2.9           11/24/2003         0.4         2.9           11/25/2003         0.5         2.9           11/26/2003         0.6         2.9           11/27/2003         0.6         2.9           11/28/2003         0.5         2.9           11/29/2003         0.8         2.9           11/29/2003         0.5         2.9           12/01/2003         0.5         2.9           12/02/2003         0.5         2.9           12/03/2003         0.5         2.9           12/03/2003         0.5         2.9           12/04/2003         0.5         2.9           12/05/2003         0.5         2.9           12/06/2003         0.6         2.9           12/07/2003         0.6         3.1           12/08/2003         1.1         2.9           12/10/2003         0.5         2.9           12/11/2003         0.6         3.1           12/10/2003         0.5         2.9           12/11/2003         0.6         3.1           12/15/2003         0.6         3.1 <td></td> <td></td> <td></td>			
11/23/2003         0.5         2.9           11/24/2003         0.4         2.9           11/25/2003         0.5         2.9           11/26/2003         0.6         2.9           11/27/2003         0.6         2.9           11/28/2003         0.5         2.9           11/29/2003         0.8         2.9           11/30/2003         0.5         2.9           12/01/2003         0.6         2.9           12/02/2003         0.5         2.9           12/03/2003         0.5         2.9           12/04/2003         0.5         2.9           12/04/2003         0.5         2.9           12/05/2003         0.5         2.9           12/06/2003         0.6         2.9           12/07/2003         0.6         2.9           12/08/2003         1.1         2.9           12/10/2003         0.5         2.9           12/10/2003         0.5         2.9           12/11/2003         0.6         2.9           12/11/2003         0.6         2.9           12/14/2003         0.6         3.1           12/15/2003         0.7         2.9 <td></td> <td></td> <td></td>			
11/24/2003       0.4       2.9         11/25/2003       0.5       2.9         11/26/2003       0.6       2.9         11/28/2003       0.5       2.9         11/29/2003       0.8       2.9         11/29/2003       0.8       2.9         11/30/2003       0.5       2.9         12/01/2003       0.6       2.9         12/02/2003       0.5       2.9         12/03/2003       0.5       2.9         12/04/2003       0.5       2.9         12/05/2003       0.6       2.9         12/06/2003       0.6       2.9         12/07/2003       0.6       3.1         12/08/2003       1.1       2.9         12/10/2003       0.5       2.9         12/10/2003       0.5       2.9         12/11/2003       0.6       2.9         12/11/2003       0.6       2.9         12/11/2003       0.6       2.9         12/11/2003       0.6       3.1         12/15/2003       0.6       3.1         12/15/2003       0.6       3.1         12/15/2003       0.6       3.1         12/19/2003       <			
11/25/2003         0.5         2.9           11/26/2003         0.6         2.9           11/28/2003         0.5         2.9           11/28/2003         0.5         2.9           11/29/2003         0.8         2.9           11/30/2003         0.5         2.9           12/01/2003         0.6         2.9           12/02/2003         0.5         2.9           12/03/2003         0.5         2.9           12/04/2003         0.5         2.9           12/05/2003         0.6         2.9           12/06/2003         0.6         2.9           12/07/2003         0.6         3.1           12/08/2003         1.1         2.9           12/10/2003         0.5         2.9           12/10/2003         0.5         2.9           12/11/2003         0.6         2.9           12/11/2003         0.6         2.9           12/11/2003         0.6         2.9           12/11/2003         0.6         3.1           12/15/2003         0.6         3.1           12/15/2003         0.6         3.1           12/15/2003         0.6         3.1 <td></td> <td></td> <td></td>			
11/26/2003       0.6       2.9         11/28/2003       0.5       2.9         11/29/2003       0.8       2.9         11/30/2003       0.5       2.9         12/01/2003       0.6       2.9         12/02/2003       0.5       2.9         12/03/2003       0.5       2.9         12/04/2003       0.5       2.9         12/05/2003       0.6       2.9         12/05/2003       0.6       2.9         12/06/2003       0.6       2.9         12/07/2003       0.6       2.9         12/08/2003       1.1       2.9         12/10/2003       0.7       2.9         12/10/2003       0.5       2.9         12/11/2003       0.5       2.9         12/11/2003       0.5       2.9         12/11/2003       0.6       3.1         12/15/2003       0.7       2.9         12/14/2003       0.6       3.1         12/15/2003       0.6       3.1         12/15/2003       0.6       3.1         12/19/2003       0.6       3.1         12/19/2003       0.6       3.1         12/19/2003       <			
11/27/2003         0.6         2.9           11/28/2003         0.5         2.9           11/29/2003         0.8         2.9           11/30/2003         0.5         2.9           12/01/2003         0.6         2.9           12/02/2003         0.5         2.9           12/03/2003         0.5         2.9           12/04/2003         0.5         2.9           12/05/2003         0.6         2.9           12/06/2003         0.6         2.9           12/07/2003         0.6         3.1           12/08/2003         1.1         2.9           12/09/2003         0.7         2.9           12/10/2003         0.5         2.9           12/11/2003         0.5         2.9           12/11/2003         0.5         2.9           12/11/2003         0.6         3.1           12/15/2003         0.7         2.9           12/14/2003         0.6         3.1           12/15/2003         0.6         3.1           12/15/2003         0.6         3.1           12/16/2003         0.6         3.1           12/16/2003         0.6         3.1 <td></td> <td><del></del></td> <td></td>		<del></del>	
11/28/2003         0.5         2.9           11/29/2003         0.8         2.9           11/30/2003         0.5         2.9           12/01/2003         0.6         2.9           12/02/2003         0.5         2.9           12/03/2003         0.5         2.9           12/04/2003         0.5         2.9           12/05/2003         0.6         2.9           12/06/2003         0.6         2.9           12/07/2003         0.6         2.9           12/08/2003         1.1         2.9           12/10/2003         0.7         2.9           12/10/2003         0.5         2.9           12/11/2003         0.6         2.9           12/11/2003         0.5         2.9           12/11/2003         0.6         2.9           12/11/2003         0.6         2.9           12/15/2003         0.7         2.9           12/16/2003         Offline         Offline           12/18/2003         Offline         Offline           12/19/2003         Offline         Offline           12/19/2003         Offline         Offline           12/20/2003         0.0 </td <td></td> <td></td> <td></td>			
11/29/2003         0.8         2.9           11/30/2003         0.5         2.9           12/01/2003         0.6         2.9           12/02/2003         0.5         2.9           12/03/2003         0.5         2.9           12/04/2003         0.5         2.9           12/05/2003         0.6         2.9           12/06/2003         0.6         2.9           12/07/2003         0.6         3.1           12/08/2003         1.1         2.9           12/09/2003         0.7         2.9           12/10/2003         0.5         2.9           12/11/2003         0.6         2.9           12/11/2003         0.6         2.9           12/13/2003         0.6         2.9           12/14/2003         0.6         3.1           12/15/2003         0.6         3.1           12/15/2003         0.6         3.1           12/15/2003         0.6         3.1           12/19/2003         0.6         3.1           12/19/2003         0.6         3.1           12/19/2003         0.7         0.0           12/21/2003         0.0         0.0 <td></td> <td></td> <td></td>			
11/30/2003         0.5         2.9           12/01/2003         0.6         2.9           12/02/2003         0.5         2.9           12/03/2003         0.5         2.9           12/04/2003         0.5         2.9           12/05/2003         0.6         2.9           12/06/2003         0.6         2.9           12/07/2003         0.6         3.1           12/08/2003         1.1         2.9           12/09/2003         0.7         2.9           12/10/2003         0.5         2.9           12/11/2003         0.6         2.9           12/11/2003         0.6         2.9           12/13/2003         0.6         2.9           12/14/2003         0.6         3.1           12/15/2003         0.6         3.1           12/15/2003         0.6         3.1           12/15/2003         0.6         3.1           12/18/2003         0.6         3.1           12/19/2003         0.6         3.1           12/19/2003         0.7         0.0           12/21/2003         0.7         0.0           12/21/2003         0.0         0.0 <td></td> <td><del></del></td> <td></td>		<del></del>	
12/01/2003         0.6         2.9           12/02/2003         0.5         2.9           12/03/2003         0.5         2.9           12/04/2003         0.5         2.9           12/05/2003         0.6         2.9           12/06/2003         0.6         2.9           12/07/2003         0.6         3.1           12/08/2003         1.1         2.9           12/09/2003         0.7         2.9           12/10/2003         0.5         2.9           12/11/2003         0.6         2.9           12/11/2003         0.6         2.9           12/13/2003         0.6         3.1           12/15/2003         0.6         3.1           12/15/2003         0.6         3.1           12/15/2003         Offline         Offline           12/19/2003         Offline         Offline           12/19/2003         Offline         Offline           12/20/2003         0.0         0.0           12/21/2003         Offline         Offline           12/22/2003         0.6         2.9           12/23/2003         0.7         2.9           12/24/2003         0.7 </td <td></td> <td></td> <td></td>			
12/02/2003         0.5         2.9           12/03/2003         0.5         2.9           12/04/2003         0.6         2.9           12/05/2003         0.6         2.9           12/06/2003         0.6         2.9           12/07/2003         0.6         3.1           12/08/2003         1.1         2.9           12/09/2003         0.7         2.9           12/10/2003         0.5         2.9           12/11/2003         0.6         2.9           12/11/2003         0.6         2.9           12/13/2003         0.6         3.1           12/15/2003         0.6         3.1           12/15/2003         0.6         3.1           12/15/2003         0.6         3.1           12/15/2003         0.6         3.1           12/19/2003         0.6         3.1           12/19/2003         0.6         0.0           12/19/2003         0.7         0.0           12/21/2003         0.7         0.0           12/22/2003         0.0         0.0           12/22/2003         0.6         2.9           12/23/2003         0.7         2.9 <td></td> <td></td> <td></td>			
12/03/2003         0.5         2.9           12/04/2003         0.5         2.9           12/05/2003         0.6         2.9           12/06/2003         0.6         2.9           12/07/2003         0.6         3.1           12/08/2003         1.1         2.9           12/09/2003         0.7         2.9           12/10/2003         0.5         2.9           12/11/2003         0.6         2.9           12/11/2003         0.6         2.9           12/13/2003         0.8         2.9           12/14/2003         0.6         3.1           12/15/2003         Offline         Offline           12/16/2003         Offline         Offline           12/19/2003         Offline         Offline           12/19/2003         Offline         Offline           12/21/2003         Offline         Offline           12/22/2003         0.6         2.9           12/23/2003         0.6         2.9           12/24/2003         0.7         2.9           12/25/2003         0.7         2.9           12/25/2003         0.7         2.9           12/26/2003         <			
12/04/2003         0.5         2.9           12/05/2003         0.6         2.9           12/06/2003         0.6         2.9           12/07/2003         0.6         3.1           12/08/2003         1.1         2.9           12/09/2003         0.7         2.9           12/10/2003         0.5         2.9           12/11/2003         0.6         2.9           12/12/2003         0.7         2.9           12/13/2003         0.8         2.9           12/14/2003         0.6         3.1           12/15/2003         Offline         Offline           12/16/2003         Offline         Offline           12/19/2003         Offline         Offline           12/19/2003         Offline         Offline           12/20/2003         0.0         0.0           12/21/2003         0.6         2.9           12/22/2003         0.6         2.9           12/23/2003         0.7         2.9           12/25/2003         0.7         2.9           12/25/2003         0.7         2.9           12/25/2003         0.7         2.9           12/26/2003         0.7 </td <td></td> <td></td> <td></td>			
12/05/2003         0.6         2.9           12/06/2003         0.6         2.9           12/07/2003         0.6         3.1           12/08/2003         1.1         2.9           12/09/2003         0.7         2.9           12/10/2003         0.5         2.9           12/11/2003         0.6         2.9           12/12/2003         0.7         2.9           12/13/2003         0.8         2.9           12/14/2003         0.6         3.1           12/15/2003         Offline         Offline           12/16/2003         Offline         Offline           12/18/2003         Offline         Offline           12/19/2003         Offline         Offline           12/20/2003         0.0         0.0           12/21/2003         Offline         Offline           12/22/2003         0.6         2.9           12/23/2003         0.7         2.9           12/24/2003         0.7         2.9           12/25/2003         0.7         2.9           12/26/2003         0.7         2.9           12/26/2003         0.7         2.9			
12/06/2003         0.6         2.9           12/07/2003         0.6         3.1           12/08/2003         1.1         2.9           12/09/2003         0.7         2.9           12/10/2003         0.5         2.9           12/11/2003         0.6         2.9           12/12/2003         0.7         2.9           12/13/2003         0.8         2.9           12/14/2003         0.6         3.1           12/15/2003         Offline         Offline           12/16/2003         Offline         Offline           12/18/2003         Offline         Offline           12/19/2003         Offline         Offline           12/21/2003         Offline         Offline           12/22/2003         0.6         2.9           12/23/2003         0.7         2.9           12/24/2003         0.7         2.9           12/25/2003         0.7         2.9           12/26/2003         0.7         2.9           12/26/2003         0.7         2.9			
12/07/2003         0.6         3.1           12/08/2003         1.1         2.9           12/09/2003         0.7         2.9           12/10/2003         0.5         2.9           12/11/2003         0.6         2.9           12/12/2003         0.7         2.9           12/13/2003         0.8         2.9           12/14/2003         0.6         3.1           12/15/2003         Offline         Offline           12/16/2003         Offline         Offline           12/18/2003         Offline         Offline           12/19/2003         Offline         Offline           12/20/2003         0.0         0.0           12/21/2003         Offline         Offline           12/22/2003         0.6         2.9           12/23/2003         0.7         2.9           12/24/2003         0.7         2.9           12/25/2003         0.7         2.9           12/26/2003         0.7         2.9           12/26/2003         0.7         2.9			
12/08/2003         1.1         2.9           12/09/2003         0.7.         2.9           12/10/2003         0.5         2.9           12/11/2003         0.6         2.9           12/12/2003         0.7         2.9           12/13/2003         0.8         2.9           12/14/2003         0.6         3.1           12/15/2003         Offline         Offline           12/16/2003         Offline         Offline           12/18/2003         Offline         Offline           12/19/2003         Offline         Offline           12/20/2003         0.0         0.0           12/21/2003         Offline         Offline           12/22/2003         0.6         2.9           12/23/2003         0.7         2.9           12/25/2003         0.7         2.9           12/25/2003         0.7         2.9           12/26/2003         0.7         2.9           12/26/2003         0.7         2.9			
12/09/2003         0.7.         2.9           12/10/2003         0.5         2.9           12/11/2003         0.6         2.9           12/12/2003         0.7         2.9           12/13/2003         0.8         2.9           12/14/2003         0.6         3.1           12/15/2003         Offline         Offline           12/16/2003         Offline         Offline           12/18/2003         Offline         Offline           12/19/2003         Offline         Offline           12/20/2003         0.0         0.0           12/21/2003         Offline         Offline           12/22/2003         0.6         2.9           12/23/2003         0.7         2.9           12/25/2003         0.7         2.9           12/25/2003         0.7         2.9           12/26/2003         0.7         2.9           12/26/2003         0.7         2.9			
12/10/2003         0.5         2.9           12/11/2003         0.6         2.9           12/12/2003         0.7         2.9           12/13/2003         0.8         2.9           12/14/2003         0.6         3.1           12/15/2003         Offline         Offline           12/16/2003         Offline         Offline           12/17/2003         Offline         Offline           12/19/2003         Offline         Offline           12/20/2003         0.0         0.0           12/21/2003         Offline         Offline           12/22/2003         0.6         2.9           12/23/2003         0.7         2.9           12/24/2003         0.7         2.9           12/25/2003         0.7         2.9           12/26/2003         0.7         2.9			
12/11/2003         0.6         2.9           12/12/2003         0.7         2.9           12/13/2003         0.8         2.9           12/14/2003         0.6         3.1           12/15/2003         Offline         Offline           12/16/2003         Offline         Offline           12/17/2003         Offline         Offline           12/18/2003         Offline         Offline           12/19/2003         Offline         Offline           12/20/2003         0.0         0.0           12/21/2003         Offline         Offline           12/22/2003         0.6         2.9           12/23/2003         0.7         2.9           12/24/2003         0.7         2.9           12/25/2003         0.7         2.9           12/26/2003         0.7         2.9			
12/12/2003       0.7       2.9         12/13/2003       0.8       2.9         12/14/2003       0.6       3.1         12/15/2003       Offline       Offline         12/16/2003       Offline       Offline         12/17/2003       Offline       Offline         12/18/2003       Offline       Offline         12/19/2003       Offline       Offline         12/20/2003       0.0       0.0         12/21/2003       Offline       Offline         12/22/2003       0.6       2.9         12/23/2003       0.7       2.9         12/24/2003       0.7       2.9         12/25/2003       0.7       3.0         12/26/2003       0.7       2.9			
12/13/2003       0.8       2.9         12/14/2003       0.6       3.1         12/15/2003       Offline       Offline         12/16/2003       Offline       Offline         12/17/2003       Offline       Offline         12/18/2003       Offline       Offline         12/19/2003       Offline       Offline         12/20/2003       0.0       0.0         12/21/2003       Offline       Offline         12/22/2003       0.6       2.9         12/23/2003       0.7       2.9         12/24/2003       0.7       2.9         12/25/2003       0.7       3.0         12/26/2003       0.7       2.9			
12/14/2003         0.6         3.1           12/15/2003         Offline         Offline           12/16/2003         Offline         Offline           12/17/2003         Offline         Offline           12/18/2003         Offline         Offline           12/19/2003         Offline         Offline           12/20/2003         0.0         0.0           12/21/2003         Offline         Offline           12/22/2003         0.6         2.9           12/23/2003         0.7         2.9           12/25/2003         0.7         2.9           12/25/2003         0.7         3.0           12/26/2003         0.7         2.9			
12/15/2003         Offline         Offline           12/16/2003         Offline         Offline           12/17/2003         Offline         Offline           12/18/2003         Offline         Offline           12/19/2003         Offline         Offline           12/20/2003         0.0         0.0           12/21/2003         Offline         Offline           12/22/2003         0.6         2.9           12/23/2003         0.7         2.9           12/24/2003         0.7         2.9           12/25/2003         0.7         3.0           12/26/2003         0.7         2.9			
12/16/2003         Offline         Offline           12/17/2003         Offline         Offline           12/18/2003         Offline         Offline           12/19/2003         Offline         Offline           12/20/2003         0.0         0.0           12/21/2003         Offline         Offline           12/22/2003         0.6         2.9           12/23/2003         0.7         2.9           12/24/2003         0.7         2.9           12/25/2003         0.7         3.0           12/26/2003         0.7         2.9			
12/17/2003         Offline         Offline           12/18/2003         Offline         Offline           12/19/2003         Offline         Offline           12/20/2003         0.0         0.0           12/21/2003         Offline         Offline           12/22/2003         0.6         2.9           12/23/2003         0.7         2.9           12/24/2003         0.7         2.9           12/25/2003         0.7         3.0           12/26/2003         0.7         2.9			
12/18/2003         Offline         Offline           12/19/2003         Offline         Offline           12/20/2003         0.0         0.0           12/21/2003         Offline         Offline           12/22/2003         0.6         2.9           12/23/2003         0.7         2.9           12/24/2003         0.7         2.9           12/25/2003         0.7         3.0           12/26/2003         0.7         2.9			
12/19/2003         Offline         Offline           12/20/2003         0.0         0.0           12/21/2003         Offline         Offline           12/22/2003         0.6         2.9           12/23/2003         0.7         2.9           12/24/2003         0.7         2.9           12/25/2003         0.7         3.0           12/26/2003         0.7         2.9			
12/20/2003     0.0     0.0       12/21/2003     Offline     Offline       12/22/2003     0.6     2.9       12/23/2003     0.7     2.9       12/24/2003     0.7     2.9       12/25/2003     0.7     3.0       12/26/2003     0.7     2.9			
12/21/2003         Offline         Offline           12/22/2003         0.6         2.9           12/23/2003         0.7         2.9           12/24/2003         0.7         2.9           12/25/2003         0.7         3.0           12/26/2003         0.7         2.9			
12/22/2003     0.6     2.9       12/23/2003     0.7     2.9       12/24/2003     0.7     2.9       12/25/2003     0.7     3.0       12/26/2003     0.7     2.9			
12/23/2003     0.7     2.9       12/24/2003     0.7     2.9       12/25/2003     0.7     3.0       12/26/2003     0.7     2.9			
12/24/2003     0.7     2.9       12/25/2003     0.7     3.0       12/26/2003     0.7     2.9			
12/25/2003     0.7     3.0       12/26/2003     0.7     2.9		0.7	
12/26/2003 0.7 2.9	12/24/2003		
	12/25/2003	0.7	<del></del>
12/27/2003 0.7 2.9	12/26/2003	0.7	
	12/27/2003		
12/28/2003 0.7 2.9	12/28/2003	0.7	2.9
12/29/2003 0.7 2.9		0.7	
12/30/2003 0.7 2.9	12/30/2003	0.7	
12/31/2003 0.7 3.0	12/31/2003	0.7	3.0

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### BAYSIDE POWER STATION - CT 1C

EXCLUDED DATA - QUARTER 4, 200	FYOURDED	DATA -	OUARTER	4, 200
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Date "	Hours Data Excluded	NOx Value of Excluded Data	Excluded Data	Reason for Exclusion -
10/01/2003		16.1	889.7	Shutdown
10/01/2000	1000	35.5	225.8	Start-up
10/07/2003	·	8.2	79	Shutdown
10/07/2003		45.2	409.9	Start-up
10/00/2003	0600	11.4	33.7	Start-up
10/09/2003		27.2	362.1	Shutdown
10/10/2003		26.4	127.3	Start-up
10/10/2003 10/11/2003		7.3	71.3	Shutdown
10/11/2003	0700	44.8	404	Start-up
	0800	10.9	*	Start-up
	2400	*	31.4	Shutdown
10/12/2003	<del></del>	19.6	1905.5	Shutdown
10/12/2003	0900	48.9	264.2	Start-up
10/13/2003		35.5	502.9	Shutdown
10/13/2003	0700	39.1	438.2	Start-up
	0800	18.1	59	Start-up
10/14/2003		7.3	82.3	Shutdown
10/14/2003		28.5	430.7	Start-up
10/15/2003	1100	42.1	153.6	Start-up
	2100	13	369.4	Shutdown
10/16/2003	<u> </u>	64	253.8	Start-up
10/16/2003 10/19/2003		7.6	280.2	Shutdown
10/19/2003		44.2	264.7	Start-up
10/20/2003	2300	7.8	84.3	Shutdown
10/21/2003	· · · · · · · · · · · · · · · · · · ·	44.4	240.7	Start-up
10/21/2003	2400	35.1	464.1	Shutdown
10/22/2003	1	42.9	393.4	Start-up
10/22/2003	1000	23.9	77.3	Start-up
	2400	7.1	64.7	Shutdown
10/23/2003		41.3	218.4	Start-up
10/23/2003	12200	7.5	59.8	Shutdown
10/24/2003		19.2	160.2	Start-up
10/24/2003		6.7	72.6	Shutdown
10/28/2003		1.7	54.2	Shutdown
10/31/2003	2200		2487.9	Shutdown
11/01/2003		35.3	148.7	Start-up
11/01/2003		25.2	367.6	Shutdown
11/04/2003	<del></del>	48	337.7	Start-up
11/04/2003	1200	27.3	195.7	Start-up
	2400	6.5	99.4	Shutdown
11/05/2003		8.8	611.1	Start-up
11/05/2003		18.6	83.9	Start-up
<u> </u>	1600	10.6	210.3	Shutdown
4410010000	1900	29	479.5	Start-up
11/06/2003			63.6	Start-up
<del></del>	0800	18.6	499.5	Shutdown
1.10=1000	2400	29	116.4	Start-up
11/07/2003	3 0800 2400	14.9	522.6	Shutdown

11/08/2003	1000	32.6	230.9	Start-up
				Shutdown
11/09/2003				Start-up
	1000			Start-up
11/10/2003				Shutdown
11/11/2003				Start-up
	2300			Shutdown
11/12/2003				Start-up
11/13/2003				Shutdown
	0600			Start-up
	0700			Start-up
	2300			Shutdown
11/14/2003				Start-up
	1700			Start-up
11/16/2003			443.6	Shutdown
	0700			Start-up
11/17/2003				Shutdown
	2300		1611.2	Shutdown
11/18/2003				Start-up
	0800			Start-up
	2400		55.7	Shutdown
11/19/2003			219.5	Start-up
11/21/2003		40.3	557.4	Shutdown
11/21/2000	0700			Start-up
11/26/2003		10.1	170.4	Shutdown
1172072000	0700	38.5	434.8	Start-up
	0800	9.8	87.7	Start-up
11/27/2003		9.9	92.4	Shutdown
11/2//2000	0900	29.2	492.1	Start-up
	1000	19.7	69.8	Start-up
<u> </u>	2400	25.1	302.2	Shutdown
11/28/2003		25.3	606.4	Start-up
111201200	1000	24.4	84.3	Start-up
( <del></del>	2400 .	17.8	540	Shutdown
11/29/2003		53.4	397.6	Start-up
	0800	15.6	*	Start-up
12/02/2003		18	449.5	Shutdown
12/03/2003		45	184.8	Start-up
12/05/2003		31.2	463.5	Shutdown
	0500	35.4	416.8	Start-up
<b> </b>	0600	15.7	21.2	Start-up
	2300	23.5	305.3	Shutdown
12/06/2003	<u> </u>	46.9	181.2	Start-up
12/07/2003		*	22.4	Shutdown
1 2 3 3 3 3	2200	27	1455.6	Shutdown
12/08/2003	<del></del>	55.3	433.1	Start-up
12.00,2000	0700	18.5	•	Start-up
12/11/2003		6.2	26.6	Shutdown.
12, 17,2000	0200	21.1	1449.7	Shutdown
<b> </b>	0600	45.6	215.7	Start-up
12/12/2003	<del></del>	17.9	208.6	Shutdown
12/12/2000	0500	38.8	157.6	Start-up

12/14/2003 21	00	*		Shutdown
	200	38.8	1371.9	Shutdown
12/20/2003 08		27.2	537.2	Start-up
	100	45.2	269.7	Shutdown
	000	62.3	220.3	Start-up
	00	43.3	1185.9	Shutdown
12/22/2003 01		2	258.5	Cold Steam Turbine Start-up
	200		214.1	Cold Steam Turbine Start-up
	300	59.9	493.5	Cold Steam Turbine Start-up
	000	51.7	467.2	Cold Steam Turbine Start-up
	100	55.1	180.6	Cold Steam Turbine Start-up
	200	44	168.1	Cold Steam Turbine Start-up
	300	44.3	165.2	Cold Steam Turbine Start-up
	100	44.8	162.8	Cold Steam Turbine Start-up
	500	45.4	161.8	Cold Steam Turbine Start-up
	300	45.5	522.5	Cold Steam Turbine Start-up
	700	41.4	603.9	Cold Steam Turbine Start-up
	300	43.4	547.4	Cold Steam Turbine Start-up
	900	18.5	18.8	Cold Steam Turbine Start-up
12/27/2003 01		8.5	105.2	Shutdown
	700	39.5	394.8	Start-up
	300	28.4	98.6	Start-up
12/31/2003 22		*	40.8	Shutdown
	300	*	2348	Shutdown

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## BAYSIDE POWER STATION - CT 1C MAINTENANCE/REPAIR OF CEMS - QUARTER 4, 2003

Date 😽	Unusual Maint: Or Repair of CEMS辦意語等							
	No Unusual Maintenance of CEMS							
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#### BAYSIDE POWER STATION - CT 1C MONITOR DOWNTIME - QUARTER 4, 2003

Date	Hours of Missing Data for Monitor Downtime	Reason for Monitor Downtime
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Monitor availability:	ిగ్రామం చేస్తానికి ఉంది.		10070	
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Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

1404 total hours

RATA data required pursuant to these CFRs

NOx: 40 CFR 75, Appendix B CO: 40 CFR 60, Appendix F Date RATA data

#### MONITORING DATA CHECKING SOFTWARE 4.1 BETA

05/28/2003

TEST SUMMARY REPORT

PAGE 1

ORIS Code: 7873 State: FL

Facility Name: BAYSIDE County: HILLSBOROUGH

\_\_\_\_\_\_\_\_

Unit/ Reported Recalculated
Stack Sys Comp Test Hour/ Test Load Test Test

ID Comp/Sys Parm Type Type End Date Time # Lvls Reason Result Result

CT1C /313 NOX RATA (RT 610-616) 04/18/2003 1110 1 1 C Pass-APS Pass-APS MONITORING DATA CHECKING SOFTWARE 4.1 BETA 05/28/2003

RATA REPORT (RT 610/611) PAGE 2

ORIS Code: 7873 Facility: BAYSIDE State: FL
Unit/Stack ID: CT1C System ID: 313 Parameter: NOX

Test End Date/Time: 04/18/2003 1110 Test No.: 1 # of Operating Levels: 1 Units of Measure: LB/MMBTU

Reason for Test: C

Performance Spec: <= 10.0% Next RATA: Four Op Qtrs
Recalc, Results: Pass-APS % RA:16.97 Mean Diff: 0.002 BAF: 1.111

Reported Results: Pass-APS % RA:16.97 Mean Diff: 0.002 BAF: 1.111

Operating Level: H
Start End Run Reference Monitoring Gross Load
Run Start Date Time End Date Time Status Method Value or Velocity

1 04/18/2003 0601 04/18/2003 0622 1 0.010 0.011 2 04/18/2003 0552 04/18/2003 0713 1 0.012 0.010 168 137 3 04/18/2003 0725 04/18/2003 0746 1 0.012 0.010 4 04/18/2003 0757 04/18/2003 0818 1 0.012 0.010 165 0.013 123 5 04/18/2003 0830 04/18/2003 0851 1 0.012 6 04/18/2003 0904 04/18/2003 0925 1 0.012 0.010 152 7 04/18/2003 0941 04/18/2003 1002 1 0.011 0.010 161 8 04/18/2003 1014 04/18/2003 1035 1 0.010 160 0.011 9 04/18/2003 1049 04/18/2003 1110 1 0.010 0.011

Summary Statistics Reported Recalculated

Mean of Monitoring System0.0100.010Mean of Reference Method Values0.0120.012Mean of Difference0.0020.002

Standard Deviation of Difference 0.001 0.001

 Confidence Coefficient
 0.000
 0.000

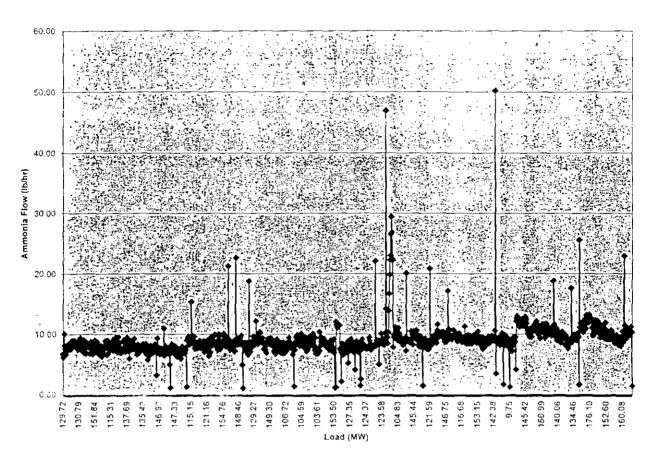
 T-Vatue
 2.306
 2.306

 Relative Accuracy:
 16.97
 16.97

 Bias Adjustment Factor
 1.111
 1.111

APS Flag 1 1
Indicator of Normal Op. Level N N
Gross Unit Load or Velocity 164 164

Reference Method Used 7e,3a



Per Air Perma No. 0570040-915-AU, Section M. Specific Condition 27

# Attachment 4

# SUMMARY REPORT – NO, EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE NSPS SUBPART GG

Pollutant: NOx - Combustion Turbine

Emission Limitation: 3.5 ppmvd @ 15% O2 on a 24-hour block

average

Reporting period dates: From	10/01/03	to_	<u>012/31/03</u>	3
------------------------------	----------	-----	------------------	---

Company: Tampa Electric Company Address: P.O. Box 111 Tampa, FL 33601-0111			or Manufacturer odel No.:	Thermal Environmental 42CLS	
Process Unit Description:	169 MW Combined Cycle Combustion Turbine (CT 2A)	Certifi Total :	of Latest CMS cation or Audit source operating on reporting period <sup>1</sup> :	November 2003 71	
	Emission Data Summary <sup>1</sup>		CMS Per	formance Summary <sup>2</sup>	
1. Duration due to:	of excess emissions in reporting	ng period	CMS downtime in r	eporting period due to:	
a. Startup	/Shutdown	6	a. Monitor equipmer	nt malfunctions	0
b. Contro	l equipment problems	0	b. Non-Monitor equi	ipment malfunctions	0
c. Process	s problems	0	c. Quality assurance	calibration	0
	cnown causes	0	d. Other known caus	ses	0
e. Unkno		0	e. Unknown causes		0
2. Total dura	ation of excess emission	6	2. Total CMS Downtim	ne	0_
3. <u>Total dura</u> Tot	ation of excess entissions x (100)	8 %	3. Total CMS Downtim Total source operat		0%

Note: On a separate page, describe any changes to CMS, process or controls during last 6 months. For each quarter, summarize the ammonia injection rates over various loads and the data excluded due to startups, shutdowns, and malfunctions.

This form is used for reporting excess emission according to New Source Performance Standard (NSPS) Subpart GG only. (CO is not a regulated by Subpart GG and is reported under the semi-annual excess emission report required by Section III, permit condition 25.)

- 1. For gases record all times in hours.
- 2. For the reporting period: if the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 60.7(c) shall be submitted.

TEC Note: The summary report form and the excess emission report required will also be submitted in the semi-annual report.

#### BAYSIDE POWER STATION - CT 2A 24 - HOUR BLOCK AVERAGE - QUARTER 4, 2003

Date	24-hour block CO	24-hour block NOx
12/20/2003	1.1	3.0
12/21/2003	1.2	3.0
12/22/2003	1.2	3.1
12/23/2003	1.1	2.9
12/24/2003	Offline	Offline
12/25/2003	Offline	Offline
12/26/2003	Offline	Offline
12/27/2003	Offline_	Offline
12/28/2003	Offline	Offline
12/29/2003	Offline	Offline
12/30/2003	Offline	Offline
12/31/2003	Offline	Offline

#### BAYSIDE POWER STATION - CT 2A

EXCLUDED DATA - QUARTER 4, 2003

Date ''	Hours Data Excluded	NOx Value of Excluded Data		Reason for Exclusion
12/21/2003	0800	10.9	157.7	Shutdown
12/22/2003		55	457.9	Start-up
12,22,2000		62.6	275.8	Start-up
	1000	26.1	2.6	Start-up
12/23/2003		30.9	172.4	Shutdown
12/23/2005	0600	45.5	336.9	Start-up

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

Data not excluded.

#### E MASIDE POWER STATION - CT 2A

### MAINTENANCE/REPAIR OF CEMS - QUARTER 4, 2003

Date said.	Unusual Maint.Or Repair of CEMS
	No Unusual Maintenance of CEMS
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## BAYSIDE POWER STATION - CT 2A MONITOR DOWNTIME - QUARTER 4, 2003

Date	Hours of Missing Data for Monitor Downtime	Reason for Monitor Downtime
\	<u> </u>	
	<u> </u>	
	<u></u>	
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illylollitol availability. 2. 4.72 - 7.72 - 7.72 - 7.72	, 00.0070
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### 40CFR75 - APPENDIX A RELATIVE ACCURACY TEST AUDIT

Customer: Tampa Electric Company Facility: Bayside Power Station

Source: CT-2A

Test Date:

11/14/03

				Air Servi	ces Group -	Test Data	Continuous Emissions Monitor		
Run	Run 1	Times	Unit F	RM ~ 7E NO <sub>x</sub>	RM - 3A O <sub>2</sub>	RM - 19 NO <sub>x</sub>	RM - 19 NO <sub>x</sub>	Difference	Run
Number	Start_	Stop	Load	ppmvd	%v, dry	lbs/mmBtu	lbs/mmBtu	lbs/mmbtu_	Flag
1	08:04	08:25	174	3.63	14.30	0.012	0.011	0.001	1
2	08:47	09:08	173	3.67	14.28	0.012	0.011	0.001	1
3	09:15	09:36	172	3.61	14.26	0.012	0.011	0.001	1
4	09:44	10:05	170	3.57	14.26	0.012	0.011	0.001	1
5	10:13	10:34	169	3.61	14.25	0.012	0.011	0.001	1
6	10:41	11:02	167	3.62	14.26	0.012	0.011	0.001	1
7	11:08	11:29	166	3.60	14.27	0.012	0.011	0.001	1
8	11:38	11:59	164	3.62	14.25	0.012	0.011	0.001	1
9	12:07	12:28	163	3.59	14.26	0.012	0.011	0.001	1

		0.011	0.001
Magnes 100	D D12	11 (1117	0.001
Means: 109	0.012	0.011	00

Standard Deviation of Differences: 0.000

Number of Valid Runs Included in Data Set:

t-value for Data Set: 2.306

2.5% Error Confidence Coefficient (CC) for Data Set: 0.000

Relative Accuracy (RA), Calculated Against Mean Reference Method Value: 8.33
Relative Accuracy (RA), Calculated As Mean Difference, Alternative Performance Specification (APS): 0.001

Bias Test: FAILED

Bias Adjustment Factor (BAF): 1.091

Alternative Bias Adjustment Factor (BAF): N/A



#### 40CFR75 - APPENDIX A RELATIVE ACCURACY TEST AUDIT

Customer: Tampa Electric Company Facility: Bayside Power Station

Source: CT-2A

Test Date:

11/14/03

Run	Run 1		Unit	Air Services Group - Test Data RM - 3A CO <sub>2</sub> , % volume dry	Continuous Emissions Monitor CO <sub>2</sub> , % volume dry	Difference CO <sub>2</sub> , % volume d	Run Iry Flag
Number	Start	Stop	Load		3.997	0.003	1
1	08:04	08:25	174	4.000		-0.009	1
2	08:47	09:08	173	4.000	4.009	0.007	1
_	09:15	09:36	172	4.020	4.013		1
3	*			4.010	4.013	-0.003	1
4	09:44	10:05		4.010	4.015	-0.005	1
5	10:13	10:34	169		4.020	-0.010	1
6	10:41	11:02	167	4.010	4.020	-0.010	1
7	11:08	11:29	166	4.01		-0.010	1
, 8	11:38	11:59	164	4.01	4.020		1
9	12:07	12:28		4.00	4.018	-0.018	1

-0.006 4.014 4.008 Means: 169

> Standard Deviation of Differences: 0.008

Number of Valid Runs Included in Data Set: 9

2.306 t-value for Data Set:

2.5% Error Confidence Coefficient (CC) for Data Set: 0.006 0.30

Relative Accuracy (RA):



### 40CFR60 - APPENDIX B, PERFORMANCE SPECIFICATION 4 RELATIVE ACCURACY TEST AUDIT

Customer: Tampa Electric Company Facility: Bayside Power Station

Source CT-2A

Test Date:

11/14/03

Applicable Glandard: 7.8 ppmvd CO @ 15% O2

				Air S	Air Services Group - Test Data		Continuous	Emissions Monitor	Difference	
Run	Run	ines	Unit	RM -10 CO	RM - 3A O <sub>2</sub>	co	co	CO	CO	Run
Number	Start	Stop	Load	ppmvd	%v, dry	ppmvd @ 15% O <sub>2</sub>	ppmvd	ppmvd @ 15% O <sub>2</sub>	ppmvd @ 15% O <sub>2</sub>	Flag
1	08:04	08:25	174	0.92	14.30	0.822	0.70	0.600	0.222	1
2	08:47	40:00	173	0.90	14.28	0.802	0.70	0.600	0.202	1
3	09:15	09:30	172	0.84	14.26	0.746	0.70	0.600	0.146	1
4	09:44	10:05	170	<b>0</b> .86	14.26	0.764	0.70	0.600	0.164	1
5	10:13	10:34	169	0.88	14.25	0.781	0.70	0.600	0.181	1
6	10:41	11:02	167	<b>0</b> .86	14.26	0.764	0.70	0.600	0.164	1
7	11:08	11:29	166	0.85	14.27	0.756	0.70	0.600	0.156	1
8	11:38	11:59	164	0.86	14.25	0.763	0.69	0.590	0.173	1
9	12:07	12:28	163	0.91	14.26	0.809	0.64	0.538	0.271	1

Means: 169 0.779 0.592 0.187

Standard Deviation of Differences: 0.039

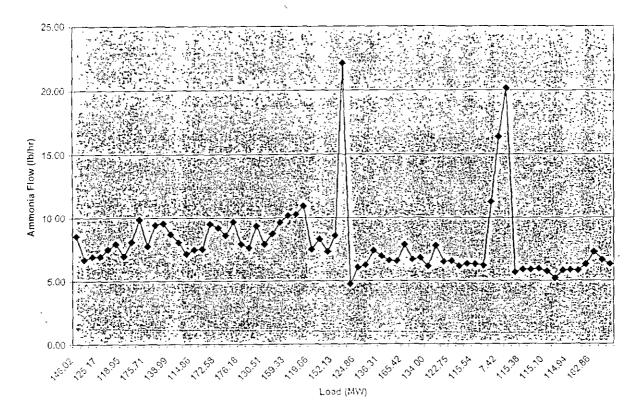
0.039 9

Number of Valid Runs Included in Data Set:

t-value for Data Set: 2.306

2.5% Error Confidence Coefficient (CC) for Data Set: 0.030

Relative Accuracy (RA), Calculated Against Mean Reference Method Value: 27.85 % Relative Accuracy (RA), Calculated Against Applicable Standard: 2.78 %



Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 24

### SUMMARY REPORT - NO<sub>x</sub> EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE NSPS SUBPART GG

Pollutant: NOx - Combustion Turbine Emission Limitation: 3.5 ppmvd @ 15% O<sub>2</sub> on a 24-hour block average

Reporting period dates: From 10/01/03 to 12/31/03

Company: Address:	Tampa Electric Company P.O. Box 111 Tampa, FL 33601-0111	Monitor Manufacturer and Model No.:	Thermal Environmental 42CLS
Process Unit	160 MW Combined Chale	Date of Latest CMS Certification or Audit	December 2003
Description:	169 MW Combined Cycle Combustion Turbine (CT 2B)	Total source operating time in reporting period <sup>1</sup> :	79

Emission Data Summary <sup>1</sup>	CMS Performance Summary <sup>2</sup>		
1. Duration of excess emissions in reporting periodue to:	od   1. CMS downtime in reporting period due to:		
a. Startup/Shutdown 5	a. Monitor equipment malfunctions0		
b. Control equipment problems 0	b. Non-Monitor equipment malfunctions0		
c. Process problems 0	c. Quality assurance calibration0		
d. Other known causes 0	d. Other known causes0		
e. Unknown causes 0	e. Unknown causes 0		
2. Total duration of excess emission 5	2. Total CMS Downtime 0		
3. Total duration of excess emissions x (100)  Total source operating time 6 %	3. Total CMS Downtime x (100)  Total source operating time 0 %		

<u>Note</u>: On a separate page, describe any changes to CMS, process or controls during last 6 months. For each quarter, summarize the ammonia injection rates over various loads and the data excluded due to startups, shutdowns, and malficultiers.

This form is used for reporting excess emission according to New Source Performance Standard (NSPS) Subpart GG only. (CO is not a regulated by Subpart GG and is reported under the semi-annual excess emission report required by Section III, permit condition 25.)

- 1. For gases record all times in hours.
- 2. For the reporting period: if the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 60.7(c) shall be submitted.

TEC Note: The summary report form and the excess emission report required will also be submitted in the semi-annual report.

BAYSIDE POWER STATION - CT 2B 24 - HOUR BLOCK AVERAGE - QUARTER 4, 2003

Date	24-hour block CO	24-hour block NOx
12/20/2003	1.2	3.0
12/21/2003	1.3	3.0
12/22/2003	1.1	3.0
12/23/2003	1.2	3.0
12/24/2003	Offline	Offline
12/25/2003	Offline	Offline
12/26/2003	Offline	Offline
12/27/2003	Offline	Offline
12/28/2003	Offline	Offline
12/29/2003	Offline	Offline
12/30/2003	Offline	Offline
12/31/2003	Offline	Offline

#### BAYSIDE POWER STATION - CT 2B

EXCLUDED DATA - QUARTER 4, 2003

Date	Hours Data Excluded	NOx Value of Excluded Data	Excluded Data	Reason for Exclusion
12/21/2003	1100	19.8	832.9	Shutdown
12/22/2003		*	8.4	Start-up
12,22,200	0400	57.6	583.9	Start-up
∯	0500	69.8	302.6	Start-up
<u> </u>	0600	33	118.1	Start-up
12/23/2003	<u> </u>	37.6	765.1	Shutdown

<sup>\*</sup> Data not excluded.

# BAYSIDE POWER STATION - CT 2B MAINTENANCE/REPAIR OF CEMS - QUARTER 4, 2003

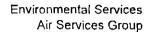
Date : :	Unusual Maint. Or Repair of CEMS
	No Unusual Maintenance of CEMS
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#### **BAYSIDE POWER STATION - CT 2B**

MONITOR DOWNTIME - QUARTER 2, 2003

Date :	Hours of Missing Data for Monitor Downtime:	Reason for Monitor Downtime
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Monitor availability 100%





### 40CFR75 - APPENDIX A RELATIVE ACCURACY TEST AUDIT

Customer: Tampa Electric Company Facility: Bayside Power Station

Source: CT-2B

Test Date:

12/16/03

					ces Group - `		Continuous Emissions Monitor		
Run	Run	ſimes	Unit F	RM - 7E NO $_{\rm x}$	RM - 3A O <sub>2</sub>	RM - 19 NO <sub>x</sub>	RM - 19 NO <sub>x</sub>	Difference	Run
Number	Start	Stop	Load	ppmvd	%v, dry	lbs/mmBtu	lbs/mmBtu	_ lbs/mmbtu	Flag
1	09:31	09:52	166	3.48	13.87	0.011	0.011	0.000	1
2	10:31	10:52	164	3.42	13.86	0.011	0.011	0.000	1
3	11:08	11:29	<b>1</b> 63	3.42	13.85	0.011	0.011	0.000	1
4	11:45	12:06	161	3.42	13.85	0.011	0.011	0.000	1
5	12:20	12:41	161	3.36	13.84	0.010	0.011	-0.001	1
6	12:53	13:14	160	3.30	13.84	0.010	0.011	-0.001	1
7	13:29	13:50	161	3.32	13.80	0.010	0.011	-0.001	1
8	14:07	14:28	161	3.39	13.80	0.010	0.011	-0.001	1
9	14:42	15:03	160	3.42	13.81	0.010	0.011	-0.001	1

Means:	162	0.010	0.011	-0.001

Standard Deviation of Differences: 0.001

Number of Valid Runs Included in Data Set: 9

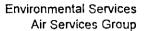
t-value for Data Set: 2.306

2.5% Error Confidence Coefficient (CC) for Data Set: 0.000

Relative Accuracy (RA), Calculated Against Mean Reference Method Value: 9.20
Relative Accuracy (RA), Calculated As Mean Difference, Alternative Performance Specification (APS): 0.001

Bias Test: PASSED

Bias Adjustment Factor (BAF): 1.000





### 40CFR75 - APPENDIX A RELATIVE ACCURACY TEST AUDIT

Customer: Tampa Electric Company Facility: Bayside Power Station

Source: CT-2B

Test Date:

12/16/03

Run Run Tim		Times	Unit	Air Services Group - Test Data	Continuous Emissions Monitor	Difference	Run
Number	Start	Stop	Load	RM - 3A CO <sub>2</sub> , % volume dry	CO <sub>2</sub> , % volume dry	CO <sub>2</sub> , % volume d	ry Flag
1	09:31	09:52	166	4.080	3.814	0.266	1
2	10:31	10:52	164	4.080	3.832	0.248	1
3	11:08	11:29	163	4.090	3.848	0.242	1
4	11:45	12:06	161	4.080	3,851	0.229	1
5	12:20	12:41	161	4.100	3.839	0.261	1
6	12:53	13:14	160	4.080	3.818	0.262	1
7	13:29	13:50	161	4.07 <b>0</b>	3.820	0.250	1
8	14:07	14:28	<b>1</b> 61	4.040	3.820	0.220	1
9	14:42	15:03	160	4.040	3.820	0.220	1
<del></del>		Means:	162	4.073	3.829	0,244	

Standard Deviation of Differences: 0.018

Number of Valid Runs Included in Data Set: 9

t-value for Data Set: 2.306

2.5% Error Confidence Coefficient (CC) for Data Set: 0.014

Relative Accuracy (RA): 6.33



# 40CFR60 - APPENDIX B, PERFORMANCE SPECIFICATION 4 RELATIVE ACCURACY TEST AUDIT

Customer: Tampa Electric Company Facility: Bayside Power Station

Source: CT-2B

Test Date:

12/16/03

Applicable Standard: 7.8 ppmvd CO @ 15% O<sub>2</sub>

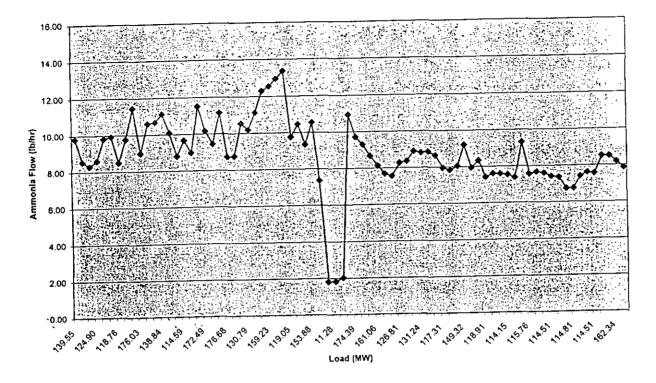
				Air Services Group - Test Data			Continuous Emissions Monitor		Difference	
Run	Run		Unit	RM -10 CO	RM - 3A O <sub>2</sub>	CO ppmvd @ 15% O₂	CO ppmvd	CO ppmvd @ 15% O₂	CO ppmvd @ 15% O	Run ₂ Flag
Number	Start	Stop	Load	ppmvd	%v, dry			1.165	-0.284	1
1	09:31	09:52	<b>16</b> 6	1.05	13.87	0.881	1.32		-0.259	1
2	10:31	10:52	164	1.14	13.86	0.955	1.41	1.214	••	1
3	11:08	11:29	163	0.93	13.85	0.778	1.18	1.055	-0.277	1
	11:45	12:06	=	1.11	13.85	0.929	1.36	1.159	-0.230	1
4		. —		7.7	13.84	1.061	1.54	1.332	-0.271	1
5	12:20	12:41	161	1.27			1.51	1.300	-0.314	1
6	12:53	13:14	160	1.18	13.84	0.986			-0.352	1
· <b>7</b>	13:29	13:50	161	1.12	13.80	0.931	1.48	1.283		,
8	14:07	14:28	161	1.03	13.80	0.856	1.40	1.209	-0.353	1
_				0.90	13.81	0.749	1.30	1.100	-0.351	1
9	14:42	15:03 Means		0.90		0.903		1.202	-0.299	

Standard Deviation of Differences: 0.045
Number of Valid Runs Included in Data Set: 9

t-value for Data Set: 2.306

2.5% Error Confidence Coefficient (CC) for Data Set: 0.035

Relative Accuracy (RA), Calculated Against Mean Reference Method Value: 36.98 %
Relative Accuracy (RA), Calculated Against Applicable Standard: 4.28 %



Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 24

# SUMMARY REPORT – NO $_{\rm x}$ EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE NSPS SUBPART GG

Pollutant: NOx - Combustion Turbine

Emission Limitation: 3.5 ppmvd @ 15% O<sub>2</sub> on a 24-hour block

average

Reporting period dates: From	10/01/03	<u>to 12</u>	<u>1/31/03</u>
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Company: Address:	Tampa Electric Company P.O. Box 111 Tampa, FL 33601-0111	Monitor Manufacturer and Model No.:	Thermal Environmental 42CLS
Process Unit		Date of Latest CMS Certification or Audit	December 2003
	169 MW Combined Cycle Combustion Turbine (CT 2C)	Total source operating time in reporting period <sup>1</sup> :	82

Emission Data Summary <sup>1</sup>		CMS Performance Summary <sup>2</sup>		
Duration of excess emissions in reporting due to:	g period	1. CMS downtime in reporting period due to:		
a. Startup/Shutdown	8	a. Monitor equipment malfunctions	4	
b. Control equipment problems	0	b. Non-Monitor equipment malfunctions	0	
c. Process problems	0	c. Quality assurance calibration	0	
d. Other known causes	0	d. Other known causes	0	
e. Unknown causes	0	e. Unknown causes	0	
2. Total duration of excess emission	8	2. Total CMS Downtime	44	
3. Total duration of excess emissions x (100)  Total source operating time	10 %	3. Total CMS Downtime x (100) Total source operating time	5 %	

<u>Note</u>: On a separate page, describe any changes to CMS, process or controls during last 6 months. For each quarter, summarize the ammonia injection rates over various loads and the data excluded due to startups, shutdowns, and maijunctions.

This form is used for reporting excess emission according to New Source Performance Standard (NSPS) Subpart GG only. (CO is not a regulated by Subpart GG and is reported under the semi-annual excess emission report required by Section III, permit condition 25.)

- 1. For gases record all times in hours.
- 2. For the reporting period: if the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 60.7(c) shall be submitted.

TEC Note: The summary report form and the excess emission report required will also be submitted in the semi-annual report.

BAYSIDE POWER STATION - CT 2C 24 - HOUR BLOCK AVERAGE - QUARTER 4, 2003

Date`	24-hour block CO	24-hour block NOx
12/20/2003	0.9	3.0
12/21/2003	1.0	3.0
12/22/2003	0.9	3.0
12/23/2003	1.0	3.0
12/24/2003	Offline	Offline
12/25/2003	Offline	Offline
12/26/2003	Offline	Offline
12/27/2003	Offline	Offline
12/28/2003	Offline	Offline
12/29/2003	Offline	Offline
12/30/2003	Offline	Offline
12/31/2003	Offline	Offline

### BAYSIDE POWER STATION - CT 2C EXCLUDED DATA - QUARTER 4, 2003

Date	Hours Data Excluded	NOx Value of Excluded Data	CO Value of Excluded Data	Reason for Exclusion
12/21/2003	1200	18.3	259.2	Shutdown
	0200	44.2	302.7	Cold Steam Turbine Start-up
	0300	66.9	172.2	Cold Steam Turbine Start-up
	0400	60.3	*	Cold Steam Turbine Start-up
	0700	54.3	*	Cold Steam Turbine Start-up
	0800	55	*	Cold Steam Turbine Start-up
	0900	18.1	*	Cold Steam Turbine Start-up
12/23/2003	2400	14.4	252.9	Shutdown

#### BAYSIDE POWER STATION - CT 2C

#### MAINTENANCE/REPAIR OF CEMS - QUARTER 4, 2003

Date 🤲 🐼	Unusual Maint/Or Repair of CEMS	
	No Unusual Maintenance of CEMS	
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#### BAYSIDE POWER STATION - CT 2C MONITOR DOWNTIME - QUARTER 4, 2003

Date :	Hours of Missing Data for Monitor Downtime	Reason for Monitor Downtime
12/22/2003		CO Monitor Problems
<u> </u>		
<b> </b>		
<u> </u>		
<u> </u>		

		0.5%
-   Banation = collability - だけさんだけもあった。	(2) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	93%
Monitor availability: 司法 (本語) (本語) (本語) (本語) (本語) (本語) (本語) (本語)	3/47-22 1 27	
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### 40CFR75 - APPENDIX A RELATIVE ACCURACY TEST AUDIT

Customer: Tampa Electric Company Facility: Bayside Power Station

Source: CT-2C

Test Date:

12/20/03

				Air Services Group - Test Data		Continuous Emissions Monitor			
Run	Run	Times	Unit F	RM - 7E NO <sub>x</sub>	RM - 3A O <sub>2</sub>	RM - 19 NO <sub>x</sub>	$RM - 19 NO_x$	Difference	Run
Number	Start	Stop	Load	ppmvd	% <u>v</u> , dry_	lbs/mm8tu	lbs/mmBtu	lbs/mmbtu	Flag
1	10:51	11:12	176	3.69	14.01	0.012	0.011	0.001	1
2	11:30	11:51	176	3.70	14.03	0.012	0.011	0.001	1
3	12:05	12:26	175	3.66	14.02	0.012	0.011	0.001	1
4	12:44	13:05	175	3.64	14.00	0.011	0.011	0.000	1
5	13:24	13:45	174	3.65	13.94	0.011	0.011	0.000	1
6	13:55	14:16	174	3.63	13.89	0.011	0.011	0.000	1
7	14:26	14:47	174	3.63	13.92	0.011	0.011	0.000	1
<sup>2</sup> 8	14:57	15:18	174	3.64	13.96	0.011	0.011	0.000	1
9	15:28	15:49	174	3.63	13.96	0.011	0.011	0.000	1

Means: 175	0.011	0.011	0.000

Standard Deviation of Differences: 0.001

Number of Valid Runs Included in Data Set:

t-value for Data Set: 2.306

2.5% Error Confidence Coefficient (CC) for Data Set: 0.000

Relative Accuracy (RA), Calculated Against Mean Reference Method Value: 6.33

Relative Accuracy (RA), Calculated As Mean Difference, Alternative Performance Specification (APS): 0.000

Bias Test: PASSED

Bias Adjustment Factor (BAF): 1.000

Alternative Bias Adjustment Factor (BAF): N/A



#### 40CFR75 - APPENDIX A **RELATIVE ACCURACY TEST AUDIT**

Customer: Tampa Electric Company Facility: Bayside Power Station

Means: 175

Source: CT-2C

Test Date:

12/20/03

Run	Run 1	Times	Unit	Air Services Group - Test Data	Continuous Emissions Monitor	Difference	Run
Number	Start	Stop	Load	RM - $3A CO_2$ , % volume dry	CO <sub>2</sub> , % volume dry	CO <sub>2</sub> , % volume d	'y Flag
1	10:51	11:12	176	4.090	3.999	0.091	1
2	11:30	11:51	176	4.080	4.000	0.080	1
3	12:05	12:26	175	4,080	4.010	0.070	1
4	12:44	13:05	175	4.080	4.007	0.073	1
5	13:24	13:45	174	4.090	4.010	0.080	1
6	13:55	14:16		4.090	4.019	0.071	1
7.	14:26	14:47	174	4.090	4.020	0.070	1
8	14:57	15:18		4.090	4.022	0.068	1
9	15:28	15:49		4.090	4.020	0.070	1

4.087

0.075 4.012

Standard Deviation of Differences:

Number of Valid Runs Included in Data Set: 9

t-value for Data Set: 2.306

0.007

2.5% Error Confidence Coefficient (CC) for Data Set: 0.006 1.97

Relative Accuracy (RA):



#### 40CFR60 - APPENDIX B, PERFORMANCE SPECIFICATION 4 **RELATIVE ACCURACY TEST AUDIT**

Customer: Tampa Electric Company Facility: Bayside Power Station

Source: CT-2C

Test Date:

12/20/03

Applicable Standard: 7.8 ppmvd CO @ 15% O<sub>2</sub>

				Air S	Air Services Group - Test Data			Emissions Monitor	Difference	
Run	Run	Γimes	Unit	RM -10 CO	RM - 3A O <sub>2</sub>	СО	CO	CO	CO	Run
Number	Start	Stop	Load	ppmvd	%v, dry	ppmvd @ 15% O₂	ppmvd	ppmvd @ 15% O <sub>2</sub>	ppmvd @ 15% O	Flag
1	10:51	11:12	176	0.94	14.01	0.805	0.90	0.800	0.005	1
2	11:30	11:51	176	0.96	14.03	0.824	0.90	0.800	0.024	1
3	12:05	12:26	175	0.87	14.02	0.746	0.90	0.800	-0.054	1
4	12:44	13:05	175	0.77	14.00	0.658	0.90	0.800	-0.142	1
5.	13:24	13:45	174	0.69	13.94	0.585	0.89	0.791	-0.206	1
6	13:55	14:16	174	0.70	13.89	0.589	0.89	0.791	-0.202	1
7	14:26	14:47	174	0.70	13.92	0.592	0.89	0.786	-0.194	1
8	14:57	15:18	174	0.73	13.96	0.621	0.85	0.755	-0.134	1
9	15:28	15:49	174	0.77	13.96	0.655	0.81	0.712	-0.057	1

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Means: 175	0.675	0.782	-0.107

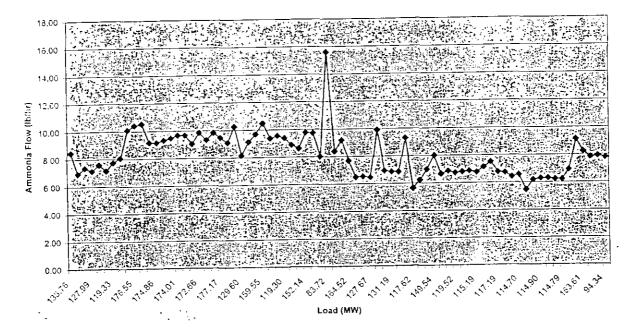
0.089 Standard Deviation of Differences:

Number of Valid Runs Included in Data Set: 9

t-value for Data Set: 2.306

2.5% Error Confidence Coefficient (CC) for Data Set:

0.068 Relative Accuracy (RA), Calculated Against Mean Reference Method Value: 25.94 % Relative Accuracy (RA), Calculated Against Applicable Standard: 2.24



Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 24

### SUMMARY REPORT – NO<sub>x</sub> EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE NSPS SUBPART GG

Pollutant: NOx - Combustion Turbine

Emission Limitation: 3.5 ppmvd @ 15% O2 on a 24-hour block

average

Reporting period dates: From 10/01/03 to 12/31/03

Tampa Electric Company Company: Monitor Manufacturer P.O. Box 111 Address: Thermal Environmental 42CLS and Model No.: Tampa, FL 33601-0111 Date of Latest CMS December 2003 Certification or Audit Process Unit Description: 169 MW Combined Cycle Total source operating Combustion Turbine time in reporting period1: (CT 2D)

Emission Data Summary <sup>1</sup>		CMS Performance Summary <sup>2</sup>	
1. Duration of excess emissions in reporting due to:	ng period	1. CMS downtime in reporting period due to:	
a. Startup/Shutdown	4	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-Monitor equipment malfunctions	0
c. Process problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emission	4	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100)  Total source operating time	5 %	3. Total CMS Downtime x (100) Total source operating time	0%

<u>Note</u>: On a separate page, describe any changes to CMS, process or controls during last 6 months. For each quarter, summarize the ammonia injection rates over various loads and the data excluded due to startups, shutdowns, and malfunctions.

This form is used for reporting excess emission according to New Source Performance Standard (NSPS) Subpart GG only. (CO is not a regulated by Subpart GG and is reported under the semi-annual excess emission report required by Section III, permit condition 25.)

- 1. For gases record all times in hours.
- 2. For the reporting period: if the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 60.7(c) shall be submitted.

TEC Note: The summary report form and the excess emission report required will also be submitted in the semi-annual report.

BAYSIDE POWER STATION - CT 2D 24 - HOUR BLOCK AVERAGE - QUARTER 4, 2003

Date	24-hour block CO	24-hour block NOx
12/20/2003	0.8	3,0
12/21/2003	1.0	3.0
12/22/2003	0.8	3.0
12/23/2003	0.9	3.0
12/24/2003	Offline	Offline
12/25/2003	Offline	Offline
12/26/2003	Offline	Offline
12/27/2003	Offline	Offline
12/28/2003	Offline	Offline
12/29/2003	Offline	Offline
12/30/2003	Offline	Offline
12/31/2003	Offline	Offline

### BAYSIDE POWER STATION - CT 2D EXCLUDED DATA - QUARTER 4, 2003

NOx Value of CO Value of Excluded Data Reason for Exclusion Hours Data Excluded Date Shutdown 55.2 594.8 12/21/2003 1200 458 Start-up 50.9 12/22/2003 0800 341.3 Start-up 38.3 0900 Shutdown 5.7 41.5 12/24/2003 2400

<sup>\*</sup> Data not excluded.

### BAYSIDE POWER STATION - CT 2D MAINTENANCE/REPAIR OF CEMS - QUARTER 4, 2003

Unusual Maint. Or Repair of CEMS (基本)
No Unusual Maintenance of CEMS

#### BAYSIDE POWER STATION - CT 2D MONITOR DOWNTIME - QUARTER 4, 2003

Date	Hours; of Missing Data for Monitor Downtime	Reason for Monitor Downtime
[		
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		<u> </u>

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用することをある こうさいごの 出血のは血管型 分類性質 しんしい	and 1 to 1 t	::::::::::::::::::::::::::::::::::::::	o II
Monitor availability:	registration of the contract	filter of the file	
MINIOTINO AVAILABILITY.			



### 40CFR75 - APPENDIX A RELATIVE ACCURACY TEST AUDIT

Customer: Tampa Electric Company Facility: Bayside Power Station

Source: CT-2D

Test Date:

12/17/03

Run	Dun -	Times	Llait 5		ces Group - 1	Test Data RM - 19 NO <sub>v</sub>	Continuous Emissions Monitor RM - 19 NO <sub>x</sub>	D:#	Dur
Muli	ryun	1111165	Unit	(101 - 1 F 140)	KIVI - SA O2	KINI - 19 IVOX	1/101 - 19 140 <sup>x</sup>	Difference	Run
Number	Start	Stop	Load	ppmvd	%v, dry	lbs/mmBtu	lbs/mmBtu	lbs/mmbtu	Flag
1	09:32	09:53	172	3.74	13.84	0.012	0.011	0.001	1
2	10:46	11:07	173	3.81	13.83	0.012	0.011	0.001	1
3	11:23	11:44	173	3.73	13.85	0.011	0.011	0.000	1
4	11:55	12:16	172	3.76	13.85	0.012	0.011	0.001	1
5	12:31	12:52	172	3.76	13.84	0.012	0.011	0.001	1
6	13:05	13:26	173	3.81	13.87	0.012	0.011	0.001	1
7	13:42	14:03	173	3.87	13.89	0.012	0.011	0.001	1
8	14:15	14:36	173	3.90	13.89	0.012	0.011	0.001	1
9	14:48	15:09	173	3.95	13.88	0.012	0.011	0.001	1

0.001	0.011	0.012	173	Means:
0.000	Standard Deviation of Differences:			
9	er of Valid Runs Included in Data Set:	Number		
2.306	t-value for Data Set:			
0.000	idence Coefficient (CC) for Data Set:	2.5% Error Confi		
9.63	• •	Relative Accuracy (RA), Calculated Aga		
0.001		, Calculated As Mean Difference, Alternativ	y (RA).	Relative Accurac
FAILED	Bias Test:	,	, , ,.	
1.081	Bias Adjustment Factor (BAF):			
N/A	native Bias Adjustment Factor (BAF):	Altern		



### 40CFR75 - APPENDIX A RELATIVE ACCURACY TEST AUDIT

Customer: Tampa Electric Company Facility: Bayside Power Station

Source: CT-2D

Test Date:

12/17/03

Run	Run	Times	Unit	Air Services Group - Test Data	Continuous Emissions Monitor	Difference	Run
Number	Start	Stop	Load	RM - 3A CO <sub>2</sub> , % volume dry	CO <sub>2</sub> , % volume dry	CO <sub>2</sub> , % volume d	ry Flag
1	09:32	09:53	172	4.150	4.084	0.066	1
2	10:46	11:07	173	4.140	4.080	0.060	1
3	11:23	11:44	173	4.110	4.071	0.039	1
4	11:55	12:16	172	4.090	4.075	0.015	1
5	12:31	12:52	172	4.090	4.071	0.019	1
6	13:05	13:26	173	4.090	4.089	0.001	1
7	13:42	14:03	173	4.100	4.119	-0.019	1
8	14:15	14:36	173	4.100	4.140	-0.040	1
9	14:48	15:09	173	4.100	4.146	-0.046	1

Means: 173 4.108 4.097 0.011

Standard Deviation of Differences: 0.041

Number of Valid Runs Included in Data Set: 9

t-value for Data Set: 2.306

2.5% Error Confidence Coefficient (CC) for Data Set: 0.031

Relative Accuracy (RA): 1.02

0.026



#### 40CFR60 - APPENDIX B, PERFORMANCE SPECIFICATION 4 **RELATIVE ACCURACY TEST AUDIT**

Customer: Tampa Electric Company Facility: Bayside Power Station

Means: 173

Source: CT-2D

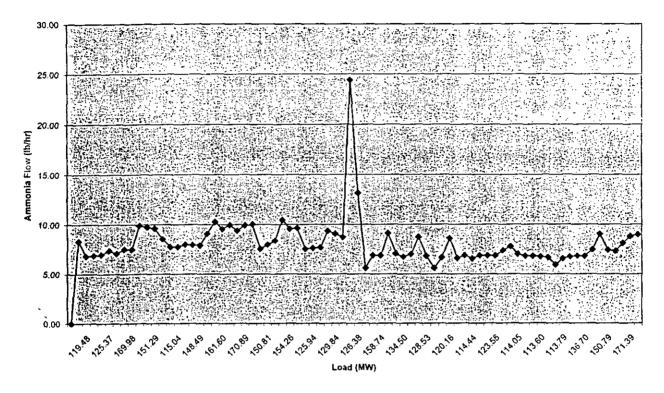
Test Date:

12/17/03

Applicable Standard: 7.8 ppmvd CO @ 15% O<sub>2</sub>

				Air S	Services Group	- Test Data	Continuous	Emissions Monitor	Difference	
Run	Run T		Unit	RM -10 CO	RM - 3A O <sub>2</sub>	CO ppmvd @ 15% O₂	CO ppmvd	CO ppmvd @ 15% O₂	CO ppmvd @ 15% C	Run ₂ Flag
Number	Start	Stop	Load	ppmvd	%v, dry				-0.054	<del></del>
1	09:32	09:53	172	0.87	13.84	0.727	0.95	0.781		1
2	10:46	11:07	173	0.82	13.83	0.684	0.96	0.773	-0.089	1
3	11:23	11:44	173	0.87	13.85	0.728	0.96	0.777	-0.049	1
-		12:16	172	0.83	13.85	0.695	0.98	0.786	-0.091	1
4	11:55		–	= :	13.84	0.802	0.96	0.764	0.038	1
5	12:31	12:52		0.96			0.90	0.709	0.122	1
6.	13:05	13:26	173	0.99	13.87	0.831		0.700	0.083	1
7	13:42	14:03	173	0.93	13.89	0.783	0.85	***	0.097	1
8	14:15	14:36	173	0.93	13.89	0.783	0.80	0.686		1
9	14:48	15:09	173	0.96	13.88	0.807	0.80	0.627	0.180	,

0.734 0.760 0.100 Standard Deviation of Differences: 9 Number of Valid Runs Included in Data Set: 2.306 t-value for Data Set: 0.077 2.5% Error Confidence Coefficient (CC) for Data Set: Relative Accuracy (RA), Calculated Against Mean Reference Method Value: 13.60 % Relative Accuracy (RA), Calculated Against Applicable Standard: 1.32



Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 24

# Attachment 5



# 40 CFR 60 APPENDIX F DATA ASSESSMENT REPORT

Period Ending Date:

December 31,

Year:

2003

Company Name:

Tampa Electric Company

Plant Name:

**Bayside Power Station** 

Source ORIS Code

7873

Source Common Name: Unit 1

EU No.: 020, 021, 022

CÈMS Information

CT-1A

CT-1B

CT-1C

CO Manufacturer:

Thermo Environmental

CO Model Number:

48C

CO Serial Number:

CO Span Value:

Dual Range 0-20/0-1000 ppmv

CO<sub>2</sub> Manufacturer:

Siemens

CO<sub>2</sub> Model Number:

Ultramat - 6

CO<sub>2</sub> Serial Number

N1-ND-0876 N1-ND-0870 N1-ND-0877

CO<sub>2</sub> Span Value:

0 - 10% volume

Note:

Cylinder Gas Audit Relative Accuracy (RA) calculated as:

 $A = ((Cm - Ca) / Ca) \times 100$ 

Where:

Cm = Average of CEMS response during audit in units of applicable standard or appropriate concentration.

Ca = Average audit value (CGA certified value or three-run

a ≈ Average addit value (CGA certified value or three-rule average for RAA) in units of applicable standard or appropriate concentration.

Appendix F, Equation 1-1

Additionally, low range analyzers that fail to meet the  $\pm$  15% are subject to a  $\pm$  5 ppm "criteria for excessive audit inaccuracy" as specified in Appendix F, 5.2.3 and calculated as:

Cm - Ca

# 1. Accuracy Assessment Results - Quarter 4, 2003 B. Cylinder Gas Audit for CO in ppm.

CT-1A Low-range

		Low-range	
	Audit <u>Point #1</u>		Audit Point #2
Audit Date:	10/18/2003		10/18/2003
Cylinder ID Number:	ALM - 066579		AAL - 955
Certification Date:	07/28/2003		09/14/2003
Certification Type:	USEPA Pr	otocol 1, Proc	edure G1
Certified Value:	5.17	ppm	11.10
CEMs Response:	5.300	ppm	11.367
RA ( <u>+</u> 15%):	2.51	%	2.41
RA ( <u>+</u> 5 ppm):	N/A	ppm High-range	N/A
	Audit	•	Audit
	Point #1		Point #2
Audit Date:	10/18/2003		10/18/2003
Cylinder ID Number:	ALM - 050741		ALM - 032306
Certification Date:	01/31/2003		09/09/2003
Certification Type:	USEPA F	Protocol 1, Pro	cedure G1
Certified Value:	244.0	ppm	545.0
CEMs Response.	249,600	ppm	544.867
Accuracy:	2.30	%	-0.06

Accuracy:

# 1. Accuracy Assessment Results - Quarter 4, 2003 B. Cylinder Gas Audit for CO in ppm. CT-1B

Audit <u>Point #1</u> 10/27/2003	·	Audit <u>Point #2</u> 10/27/2003
ALM - 066579		AAL - 19084
07/28/2003		08/03/2003
USEPA Pr	otocol 1, Proc	edure G1
5.17	ppm	11.40
6.067	ppm	11.900
17.35	%	4.39
0.90	ppm High-range	N/A
Audit <u>Point #1</u> 10/27/2003	mgmange	Audit <u>Point #2</u> 10/27/2003
AAL - 18340		ALM - 046642
02/20/2003		07/21/2003
USEPA F	Protocol 1, Pro	cedure G1
254.0	ppm	554.0
261.400	ppm	526.800
2.91	%	-4.91
	Point #1 10/27/2003  ALM - 066579  07/28/2003  USEPA Pr 5.17  6.067  17.35  0.90  Audit Point #1 10/27/2003  AAL - 18340  02/20/2003  USEPA F 254.0  261.400	Point #1 10/27/2003  ALM - 066579  07/28/2003  USEPA Protocol 1, Proc 5.17 ppm  6.067 ppm  17.35 %  0.90 ppm High-range Audit Point #1 10/27/2003  AAL - 18340  02/20/2003  USEPA Protocol 1, Proc 254.0 ppm  261.400 ppm

# 1. Accuracy Assessment Results - Quarter 4, 2003 B. Cylinder Gas Audit for CO in ppm. CT-1C

		Low-range	
	Audit		Audit
	Point #1		Point #2
Audit Date:	10/27/2003		10/27/2003
Audit Date.	10/2/12000		
Cylinder ID Number:	ALM - 066579		AAL - 19084
Cylinder in Number.	AEIVI - 000010		, ,
Certification Date:	07/28/2003		08/03/2003
Certification Date.	0112012003		00,00,200
a de de Tomas	HCEDA D	rotocol 1, Prod	edure G1
Certification Type:	USEFAF	1010001 1, 1 100	,caure or
- "- III	E 47	nnm	11.40
Certified Value:	5.17	ppm	11.40
	5 C C C C C		11.267
CEMs Response:	5.007	ppm	11.207
	2.04	0/	-1.17
RA ( <u>+</u> 15%):	9.61	%	-1.17
			<b>N</b> 1/A
RA ( <u>+</u> 5 ppm):	N/A	ppm	N/A
		High-range	
	Audit		Audit
	Point #1		<u> Point #2</u>
Audit Date:	10/27/2003		10/27/2003
, tadit Dato.			
Cylinder ID Number:	AAL - 18340		ALM - 046642
Cymraci ib Harrisor.	, 0 12		
Certification Date:	02/20/2003		07/21/2003
Certification Date.	02,20,200		
Cartification Tuno:	HSEPA F	Protocol 1, Pro	cedure G1
Certification Type:	UULIAI	1010001 1, 1 10	000010
O 05 137-h	254.0	ppm	554.0
Certified Value:	254.0	ppin	354.0
	المراجع من المراجع من المراجع		538,500
CEMs Response:	274.867	bbw	W. W
		<b>A</b> 7	2.06
Accuracy:	8.14	%	2.26

### 1. Accuracy Assessment Results - Quarter 4, 2003

B. Cylinder Gas Audit for CO<sub>2</sub> in %v/v.

#### CT-1A

	Audit <u>Point #1</u>		Audit Point #2
Audit Date:	10/18/2003		10/18/2003
Cylinder ID Number:	ALM - 045675		ALM - 046413
Certification Date:	02/04/2003		08/29/2003
Certification Type:	USEPA Pro	otocol 1, Pr	ocedure G1
Certified Value:	2.06	%, v/v	5.51
CEMs Response:	2.067	%, v/v	5.500
Accuracy:	0.34	%	-0.18

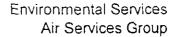
CT-1B

		<b>-</b>	
	Audit		Audit
	Point #1		Point #2
Audit Date:	10/27/2003		10/27/2003
Cylinder ID Number:	ALM - 045052		ALM - 039271
Certification Date:	02/20/2003		08/27/2002
Certification Type:	USEPA Pro	tocol 1, Pr	ocedure G1
Certified Value:	2.53	%, v/v	5.46
CEMs Response:	2.600	%, v/v	5.433
Accuracy:	2.77	%	-0.49

#### CT-1C

Audit Date:	Audit <u>Point #1</u> 10/27/2003		Audit <u>Point #2</u> 10/27/2003
Cylinder ID Number:	ALM - 045052		ALM - 039271
Certification Date:	02/20/2003		08/27/2002
Certification Type:	USEPA Pro	tocol 1, Pro	ocedure G1
Certified Value:	2.53	%, v/v	5.46
CEMs Response:	2.500	%, v/v	5.300
Accuracy:	-1.19	%	-2.93

z. Calibr	A. Out-				
		1.	Date(s):		
		2.	Numbei	of days:	 
	B. Corr	ective	Action	Taken.	





# 40 CFR 60 APPENDIX F DATA ASSESSMENT REPORT

Period Ending Date:

December 31,

Year:

2003

Company Name:

Tampa Electric Company

Plant Name:

Bayside Power Station

Source ORIS Code

7873

Source Common Name: Unit 2

EU No.: 023, 024, 025, 026

**CEMS** Information

CT-2A

CT-2B

CT-2C

CT-2D

CO Manufacturer:

Thermo Environmental

CO Model Number:

48C

CO Serial Number:

48C-74345-376 48C-74342-376 43C-74343-376 48C-73683-374

CO Span Value:

Dual Range 0-20/0-1000 ppmv

CO<sub>2</sub> Manufacturer:

Siemens

CO<sub>2</sub> Model Number:

Ultramat - 6

CO<sub>2</sub> Serial Number

N1-ND-0892 N1-ND-0897 N1-ND-0984 N1-ND-0893

CO<sub>2</sub> Span Value:

0 - 10% volume

# 1. Accuracy Assessment Results A. Relative Accuracy Test Audit(s) for CO in ppm.

	<u>CT - 2A</u> 11/14/2003	
Audit Date:	,,,,,,,	
Reference Method(s) Employed:	10/3a	
Average Reference Method Value:	0.779	ppmvd @ 15% O₂
Average CEM Value:	0.592	ppmvd @ 15% O₂
Absolute Value of Mean Difference:	0.187	ppmvd @ 15% O <sub>2</sub>
Confidence Coefficient:	0.030	ppmvd @ 15% O₂
Percent Relative Accuracy (mean of re	eference meth	nods): 27.9

The applicable standard for this unit is 7.8 ppmvd @ 15%  ${\rm O}_2$ .

Percent Relative Accuracy (applicable standard):

%

%

2.78

#### A. Relative Accuracy Test Audit(s) for CO in ppm.

CT - 2B

Audit Date: 11/12/2003

Reference Method(s) Employed: 10/3a

Average Reference Method Value: 0.717 ppmvd @ 15% O<sub>2</sub>

Average CEM Value: 0.630 ppmvd @ 15% O<sub>2</sub>

Absolute Value of Mean Difference: 0.087 ppmvd @ 15% O<sub>2</sub>

Confidence Coefficient: 0.013 ppmvd @ 15% O<sub>2</sub>

Percent Relative Accuracy (mean of reference methods): 14.07 %

Percent Relative Accuracy (applicable standard): 1.29 %

The applicable standard for this unit is 7.8 ppmvd @ 15% O<sub>2</sub>.

#### A. Relative Accuracy Test Audit(s) for CO in ppm.

**CT - 2C** 

Audit Date: 12/20/2003

Reference Method(s) Employed: 10/3a

Average Reference Method Value: 0.675 ppmvd @ 15% O<sub>2</sub>

Average CEM Value: 0.782 ppmvd @ 15% O<sub>2</sub>

Absolute Value of Mean Difference: 0.107 ppmvd @ 15% O<sub>2</sub>

Confidence Coefficient: 0.068 ppmvd @ 15% O<sub>2</sub>

Percent Relative Accuracy (mean of reference methods): 25.9 %

Percent Relative Accuracy (applicable standard): 2.24 %

The applicable standard for this unit is 7.8 ppmvd @ 15% O<sub>2</sub>.

#### A. Relative Accuracy Test Audit(s) for CO in ppm.

CT - 2D

Audit Date: 12/17/2003

Reference Method(s) Employed: 10/3a

Average Reference Method Value: 0.760 ppmvd @ 15% O<sub>2</sub>

Average CEM Value: 0.734 ppmvd @ 15% O<sub>2</sub>

Absolute Value of Mean Difference: 0.026 ppmvd @ 15% O2

Confidence Coefficient: 0.077 ppmvd @ 15% O<sub>2</sub>

Percent Relative Accuracy (mean of reference methods): 13.6 %

Percent Relative Accuracy (applicable standard): 1.32 %

The applicable standard for this unit is 7.8 ppmvd @ 15% O<sub>2</sub>.

## 1. Accuracy Assessment Results A. Relative Accuracy Test Audit(s) for CO<sub>2</sub> in % volume.

<u>CT - 2A</u>

Audit Date:

11/14/2003

Reference Method(s) Employed:

3A

Average Reference Method Value:

4.008

% volume

Average CEM Value:

4.014

% volume

Absolute Value of Mean Difference:

0.006

% volume

Confidence Coefficient:

0.006

% volume

Percent Relative Accuracy (mean of reference methods):

0.30 %

Percent Relative Accuracy (absolute difference):

0.01 % volume

#### A. Relative Accuracy Test Audit(s) for CO<sub>2</sub> in % volume.

<u>CT - 2B</u> 11/12/2003

Audit Date: 11/

Reference Method(s) Employed: 3A

Average Reference Method Value: 4.060 % volume

Average CEM Value: 3.969 % volume

Absolute Value of Mean Difference: 0.090 % volume

Confidence Coefficient: 0.025 % volume

Percent Relative Accuracy (mean of reference methods): 2.83 %

Percent Relative Accuracy (absolute difference): 0.09 % volume

#### A. Relative Accuracy Test Audit(s) for CO<sub>2</sub> in % volume.

<u>CT - 2C</u>

Audit Date:

12/20/2003

Reference Method(s) Employed:

3A

Average Reference Method Value:

4.087

% volume

Average CEM Value:

4.012

% volume

Absolute Value of Mean Difference:

0.075

% volume

Confidence Coefficient:

0.006

% volume

Percent Relative Accuracy (mean of reference methods):

1.98 %

Percent Relative Accuracy (absolute difference):

0.08 % volume

## 1. Accuracy Assessment Results A. Relative Accuracy Test Audit(s) for CO<sub>2</sub> in % volume.

<u>CT - 2D</u>

Audit Date:

12/17/2003

Reference Method(s) Employed:

ЗА

Average Reference Method Value:

4.108

% volume

Average CEM Value:

4.097

% volume

Absolute Value of Mean Difference:

0.011

% volume

Confidence Coefficient:

0.031

% volume

Percent Relative Accuracy (mean of reference methods):

1.02 %

Percent Relative Accuracy (absolute difference):

0.01 % volume

## 1. Accuracy Assessment Results Quarter 4, 2003 B. Cylinder Gas Audit for CO in ppm.

CT-2A

		Low-range	
	Audit		Audit
	Point #1		Point #2
Audit Date:	10/07/2003		10/07/2003
Cylinder ID Number:	ALM - 066579		AAL - 18045
Certification Date:	07/28/2003		09/01/2003
Certification Type:	USEPA P	rotocol 1, Pro	cedure G1
Certified Value:	5.17	ppm	11.00
CEMs Response:	5.100	ppm	11.000
Accuracy:	-1.35	% High-range	0.00
	Audit	ingila ange	Audit
	Point #1		Point#2
Audit Date:	10/07/2003		10/07/2003
Cylinder ID Number:	ALM - 034825		ALM - 064853
Certification Date:	09/01/2003		08/31/2003
Certification Type:	USEPA P	rotocol 1, Prod	cedure G1
Certified Value:	<b>24</b> 9.0	ppm	542.0
CEMs Response:	247.300	ppm	540.767
Accuracy:	-0.68	C/9	-0.23

## 1. Accuracy Assessment Results Quarter 4, 2003 B. Cylinder Gas Audit for CO in ppm.

CT-2B

		Low-range	
	Audit		Audit
	Point #1		Point #2
Audit Date:	09/05/2003		09/05/2003
Cylinder ID Number:	ALM -045402		AAL - 18045
Certification Date:	03/02/2002		AAL - 18045
Certification Type:	USEPA Pi	otocol 1, Pro	cedure G1
Certified Value:	5.08	ppm	11.00
CEMs Response:	5.067	ppm	10.967
Accuracy:	-0.26	% High-range	-0.30
	Audit	i ligii-i alige	Audit
	/ \uuii		ridait
			Point #2
Audit Date:	Point #1 09/05/2003		Point #2 09/05/2003
Audit Date: Cylinder ID Number:	Point #1 09/05/2003		
	Point #1 09/05/2003		09/05/2003
Cylinder ID Number:	Point #1 09/05/2003 ALM - 034825 09/01/2003	rotocol 1, Pro	09/05/2003 ALM - 064853 08/31/2003
Cylinder ID Number: Certification Date:	Point #1 09/05/2003 ALM - 034825 09/01/2003	rotocol 1, Pro ppm	09/05/2003 ALM - 064853 08/31/2003
Cylinder ID Number: Certification Date: Certification Type:	Point #1 09/05/2003 ALM - 034825 09/01/2003 USEPA P	·	09/05/2003 ALM - 064853 08/31/2003 cedure G1

#### 1. Accuracy Assessment Results Quarter 4, 2003

B. Cylinder Gas Audit for CO in ppm.

CT-2C

		Low-range	
	Audit Point #1		Audit Point #2
Audit Date:	11/18/2003		11/18/2003
Cylinder ID Number:	ALM - 005846		IL - 1617
Certification Date:	02/18/2002		02/02/2003
Certification Type:	USEPA P	rotocol 1, Prod	cedure G1
Certified Value:	6.07	ppm	11.30
CEMs Response: `.	6.000	ppm	11.367
Accuracy:	-1.15	% High-range	0.59
	Audit		Audit
	Point #1		Point #2
Audit Date:	11/18/2003		11/18/2003
Cylinder ID Number:	ALM - 034825		ALM - 054618
Certification Date:	09/01/2003		10/13/2003
Certification Type:	USEPA P	rotocol 1, Prod	cedure G1
Certified Value:	249.0	ppm	553.0
CEMs Response:	246.967	ppm	548.733
Accuracy:	-0.82	%	-0.77

## 1. Accuracy Assessment Results Quarter 4, 2003 B. Cylinder Gas Audit for CO in ppm.

CT-2D

		Low-range	
Audit Date:	Audit <u>Point #1</u> 11/14/2003	-	Audit <u>Point #2</u> 11/14/2003
Cylinder ID Number:	ALM - 005846		IL - 1617
Certification Date:	02/18/2002		02/02/2003
Certification Type:	USEPA Pr	otocol 1, Prod	cedure G1
Certified Value:	6.07	ppm	11.30
CEMs Response: `-	6.000	ppm	11.200
Accuracy:	-1.15	% High-range	-0.88
Audit Date:	Audit <u>Point #1</u> 11/14/2003	ingn-range	Audit <u>Point #2</u> 11/14/2003
Cylinder ID Number:	ALM - 034825		ALM - 054618
Certification Date:	09/01/2003		10/13/2003
Certification Type:	USEPA Pr	rotocol 1, Prod	cedure G1
Certification Type: Certified Value:	USEPA Pr 249.0	rotocol 1, Prod ppm	cedure <b>G1</b> 553.0
• •			

#### CT-2A

		- · -· ·	
	Audit Point #1		Audit Point #2
Audit Date:	10/09/2003		10/09/2003
Cylinder ID Number:	ALM - 019353		ALM - 060212
Certification Date:	09/01/2003		08/29/2003
Certification Type:	USEPA Pro	otocol 1, Pr	ocedure G1
Certified Value:	2.5	%, v/v	5.50
CEMs Response:	2.533	%, v/v	5.500
Accuracy:	1.32	%	0.00

#### CT-2B

Audit Date:	Audit <u>Point #1</u> 09/05/2003		Audit <u>Point #2</u> 09/05/2003
Cylinder ID Number:	ALM - 019353		ALM - 060212
Certification Date:	09/01/2003		08/29/2003
Certification Type:	USEPA Pro	tocol 1, Pre	ocedure G1
Certified Value:	2.5	%, v/v	5.5
CEMs Response:	2.500	%, v/v	5.500
Accuracy:	0.00	%	0.00

#### CT-2C

Audit Date:	Audit <u>Point #1</u> 11/18/2003		Audit <u>Point #2</u> 11/18/2003
Audit Date:	11/10/2003		11/10/2003
Cylinder ID Number:	ALM - 019353		ALM - 035365
Certification Date:	09/01/2003		09/02/2003
Certification Type:	USEPA Pro	otocol 1, Pro	ocedure G1
Certified Value:	2.5	%, v/v	5.5
CEMs Response:	2.533	%, v/v	5.500
Accuracy:	1.32	%	0.00

#### CT-2D

Audit Date:	Audit <u>Point #1</u> 11/16/2003		Audit <u>Point #2</u> 11/16/2003
Cylinder ID Number:	ALM - 019353		ALM - 035365
Certification Date:	09/01/2003		09/02/2003
Certification Type:	USEPA Pro	otocol 1, Pro	ocedure G1
Certified Value:	2.5	%, v/v	5.5
CEMs Response:	2.533	%, v/v	5.500
Accuracy:	1.32	%	0.00

2. Calibration Drift Assessment. A. Out-of-control peri	ods.		
1. Date(s):		<del></del>	
		<b>-</b> -	
2. Number o	of days:		
			_
			-
B. Corrective Action 3	Γaken		